16451

Class . No.

Presented by
The Publisher

Digitized by the Internet Archive
in 2013

http://archive.org/details/medicalage13detr

THE MEDICAL AGE

A SEMI-MONTHLY JOURNAL OF

MEDICINE AND SURGERY

DOCTOR G. ARCHIE STOCKWELL, F. Z. S.,
EDITOR.

VOLUME XIII

COLLEGE OF PHYSICIANS
LIBRARY.
PHILADELPHIA.

DETROIT, MICHIGAN
GEORGE S. DAVIS, PUBLISHER
1895

GENERAL INDEX TO VOLUME XIII.

A metaphysical study (poem) 747
Abdominal distention, to relieve 572
nephrectomy, with case 385
Abortion, asafœtida in 187, 349
black haw in 700
Absence of epiglottis 306
Absinthe 638, 769
Acetic acid in malignant tumors 657
Acid, boracic 48, 252
carbolic 509, 628
citric 117, 637
fluoric 733
hydriodic 636
lactic 602
nitric 316
oxalic 286, 381, 599
prussic 217
Acne of face, prescription for 221
prescription for 189
rosacea, refrigeration and scarification in 701
Aconite root, use of 61, 699
Acrobatism, perils of 480
Adulteration of spices and condiments 241
ÆSCULAPIUS and the priests of Greece 4
ÆTIUS, the Christian physician 41
After-coming head, new method of extracting the. 31
Age, old—*see* Longevity.
Aged, the care of the 564
AGRIPPA, CORNELIUS, and occultism 140
Ague, corn-silk worth trying in 731
Albumen metamorphoses 734
significance of 310
Albuminuria, ætiology of 606
in typhoid fever 416
significance of retinitis in 540
the pathogenesis of 300
Alcohol 104
absolute 667
habit, success in treating the 692
Alcoholism 93, 381
chronic—prescription for 252
ipecac in 374
pilocarpine in 669
prescription for 157
ALEXANDER of Tralles, works of 41
Alkaline mixtures, the danger of 538
Aloes 54
Alstonia, uses of 61, 92, 765
Amaurosis 588
Amblyopia from chocolate 750
Amenorrhœa, apiol in—with cases 397
potassium permanganate in 627
Ammonium hydrochlorate 508
Amyl nitrite 474, 507
valerianate 221
Amyloid 587
Anæmia, ferratin in 761
pernicious—arsenic in 61
Anæsthesia by saline injection 503
in diabetics, danger of 379
in veterinary medicine 319
local, by cocaine 379
scientific 319
waterlogging in 639
Anæsthetic, a new 638
action of ethyl bromide 156
local—Parsons' 92
Anæsthetic mixture, new 56
Anæsthetization accidents 569
Anal fissure, collodion in 61
reflex, the 253
Analgesic action of lactophenin 219
Anarcotine 532, 733
Anasarca, sourwood in 157
Anatomical discoveries in the seventeenth century 205
Anatomy, curious customs in the teaching of ... 168
in the fourteenth century 110
revived by Mondino 107
Ancient medicine, a leaf from the history of 616
ANDRAL 272
ANDREWS, EDMUND: A Study of the Newer Operations for Hæmorrhoids 417
Aneurysm of aorta, latent 704
of hepatic artery 607
Angina pectoris 588
and malaria 256
Angle-worm oil 114
Anhalonium Lewinii 438
Animal-extract imbroglio, the 626
Animal extracts, origin of 56
magnetism, rise of 229
Animals, feigning of death by 691
Anodyne, local—cimicifuga as a 374
sodium chloride as an 733
Anti diphtheritic serum, statistics in regard to the employment of 659
Anti-fat, bladder-wrack as an 443
duboisine as an 476
Antimony, tartrate of 732
Antiperiodic, anarcotine as 733
Antiphlogistic action of veratrum 381
Antisepsis and anti-opium 465
Antiseptic soap 115
Antiseptics and antitoxin 214
Antispasmodic action of chloral 603
of horse nettle 250
Antisudorific action of picrotoxin 186
Antitoxin and nephritis 91
and THE MEDICAL AGE 83
—caution 119
fraudulent 53
in diphtheria 16, 127, 539, 764
not like tuberculin 55
regulations regarding the sale of 55
—should it be administered early? 599
value of 49
vs. antitoxine 85
"whooped up" 598
ANTROBUS, Mrs. BERTHA: A Psychological Mystery 420
Anus, foreign bodies in 248
Aorta, aneurysm of 704
Aphasia 588
Aphrodisiac, a rational 605
muira-puama as an 25, 400
Apiol 391, 402
as a regulator in menstruation 399
in amenorrhœa and dysmenorrhœa 397
in the treatment of intermittent fevers and periodic neuralgias 391
Apis mellifica, therapeutics of 724
Apocynum, indications for 155, 750
Apomorphine, uses of 26, 221, 502

Apomorphine *vs.* tobacco..... 502
Apoplexy..... 587
retinal..... 588
Appendicitis caused by a $200 pearl..... 470
Arabian medicine, history of.....66, 69
Aralia racemosa..... 349
Archæology, medical.....119, 204, 317, 533
Archiaters, functions of..... 43
Arcus senilis..... 588
Aretæus, perspicacity of..... 35
Argon, the newly discovered element..... 179
Aristotle, physiology of..... 12
Armies of the world, sanitary organization of... 515 *et seq.*
Army surgeon, a female..... 725
Arsenic.....61, 157, 316
Arterio-sclerosis as related to corpulence..... 745
Artery, hepatic—aneurysm of..... 607
Artificial anus, new method for..... 192
Asafœtida.....187, 349
Asclepiadæ, origin of..... 5
philosophy of..... 38
Aspermatism, a case of..... 253
Asphyxia from gas or charcoal, nitro-glycerin in. 310, 508
in the new-born, treatment of..... 309
Asthma, ætiology and treatment of..... 45
and *Euphorbia pilulifera*.....157, 400
Aralia racemosa in..... 349
caffeine in..... 699
ethyl iodide in..... 569
menthol in..... 348
prescriptions for..... 476
sodium iodide in..... 93
spray and mixture for..... 252
Astigmatism as a factor in the causation of myopia..... 63
Asylums for the insane, who should be committed to?..... 77
Atoms, ancient view of..... 39
"Authority"..... 564
Avenbrugger, career of..... 231
Avicenna, labors of..... 67

Bacteria and cold..... 308
Bacteriological theories and therapeusis....705, 734
See also Germ pathology.
Bacteriology, a telling blow to..... 608
modern..... 497
Baillot, Dr.: Apiol in Amenorrhœa and Dysmenorrhœa..... 397
Baking powders..... 318
Barthez, views of..... 211
Basedow's disease from thyroid medication..... 412
Baths in the Middle Ages..... 108
revival of..... 238
Bean, common—therapeutics of..... 444
Bed-sores, prescription for..... 413
Bee-sting, comparative fineness of..... 599
Bell, F. F.: Asthma..... 44
Belladonna, therapeutics of.....124, 249, 285, 669
Benivieni, what we owe to..... 133
Benzin..... 250
Benzoin..... 221
Berberis aquifolium..... 444
Bernard, Claude..... 272
"Beside the Bonnie Briar Bush"..... 278
Bezoar—*see* Calculus.
Biblical medicine..... 2
Bichat, sketch of..... 231
Bicycle fatalities.....439, 565
Bicycling and the heart..... 474
Bile in urine..... 672
Biliary cirrhosis in children..... 640
Bilious fever, pseudo-continued..... 132
Billings, Doctor John S..... 754
Bilious remittent fever of the tropics—cases.321, 363
Billroth, Theodor..... 297
Bird and lizard, an embarrassing situation for.. 563
Births and deaths in St. Petersburg..... 22
Bismuth, value of.....189, 314
Black cat, value of a..... 753
Black haw.....123, 700
Bladder and urethra, cases of supernumerary.444, 565
atony, electricity in..... 644
diagnosis by means of the cystoscope.. 449
diseases, santonin in..... 443
irrigation..... 669
irritability, to alleviate..... 477
sphincter..... 84
troubles, corn-silk in..... 731
Bladder-wrack..... 443
Bleeding..... 134
general, first recommended by Botal... 143
Blennorrhagic vaginitis, prescription for..... 701
Blindness caused by male fern..... 407
Blood-stasis, horse-chestnut in..... 443
Boerhaave, sketch of..... 208
Boiling oil to check hæmorrhage..... 136
Boils, chloral in..... 605
in the gouty.....572, 605
yeast in the cure of..... 60
Boletus laracis..... 251
Book Reviews:
A Standard Dictionary of the English Language..... 472
Abrams, Albert: Transactions of the Antiseptic Club..... 313
Apostoli, G.: Travaux d'Électrothérapic Gynécologique..... 379
Avinash Chandra Kaviratna Kaviraja: Charaka-Samhita..... 284
Ballantine, Henry: On India's Frontier..... 218
Beard, George W.: Sexual Neurasthenia..... 122
Beck, Carl: Manual of Surgical Asepsis..... 313
Bourinot, J. G.: How Canada is Governed... 730
Bradford, Thomas L.: Life and Letters of Hahnemann..... 121
Brunton, T. Lauder: Modern Development of Harvey's Work..... 665
Buchanan, Charles M.: Antisepsis and Antiseptics..... 154
Buck: A Manual of Diseases of the Ear..... 154
Burnett, J. Compton: Diseases of the Liver... 537
Gout and its Cure..... 506
Cargill, J. F.: A Freak in Finance..... 472
Carus, Paul: Fundamental Problems..... 91
Cerna, David: Notes on the Newer Remedies. 346
Chapman, Frank M.: Birds of Eastern North America..... 440
Cheyne, W. Watson: Treatment of Wounds, Ulcers, and Abscesses..... 346
Clark, Daniel: Mental Disease..... 185
Cobbe, William R.: Doctor Judas..... 568
Compton, Herbert: A Free Lance in a Far Land..... 566
Crockett, S. R.: A Galloway Herd..... 760
Curtis, Edward: General Medicinal Technology..... 247
Da Costa, John C.: Manual of Modern Surgery 90
Daudet, Alphonse: Tromont Jr. and Risler Sr. 537
Dennis and Billings: A System of Surgery..... 506, 697, 759
Doyle, A. Conan: The White Company..... 312
Duhring, Louis A.: Cutaneous Medicine..... 633
Fenwick, E. Hurry: Urinary Surgery..... 313
Fick, A. Eugen: Hand-book of Diseases of the Eye..... 473
Fleming, E. D. and Augustine: Three Years in a Mad-house..... 58

16451

BOOK REVIEWS—*Continued.*
Frothingham, Langdon: Guide for the Laboratory Bacteriologist 346
Fuller, Eugene: Male Sexual Disorders..... 567
Gleason, E. B: Essentials of Diseases of the Ear 122
Goodno, Wm. C.: The Practice of Medicine .. 218
Gorham and Tower: A Laboratory Guide for the Dissection of the Cat.... 506
Gould, Nat: Only a Commoner..... 696
Grandin and Jarnan: Obstetric Surgery 506
Gray, Asa: The Elements of Botany..... 345
Green, T. Henry: Pathology and Morbid Anatomy..... 567
Griffith, J. P. Crozier: The Care of the Baby . 506
Hale, Edwin M.: The Practice of Medicine... 345
Hamilton, Allan McLane, and Lawrence Godkin: A System of Legal Medicine..... 57
Hare, Hobart A.: Text-book of Practical Therapeutics..... 568
Hartmann, Franz: Buried Alive..... ... 568
Holbrook, M. L.: Physical, Intellectual and Moral Advantages of Chastity..... 442
Howe, Joseph W.: Excessive Venery..... 473
Jackson, Edward: Skiaskopy..... 473
Kaposi, Moriz: Pathology and Treatment of Diseases of the Skin..... 442
Karazin, N. M.: The Two-legged Wolf..... 122
Kellogg, J. H.: The Art of Massage..... 568
Knies, Max: Relations of the Eye to General Diseases..... 121
Krieger, Georg E.: Blood-serum Therapy and Antitoxin..... 346
Laur, Pierre de: Napoleon III. and Lady Stuart..... 442
Leonard, C. Henri: Pocket Materia Medica and Therapeutics..... 568
Leonard, C. Henri: The Pocket Anatomist... 122
Letchworth, Wm. T.: The Insane in Foreign Countries..... 24
Library Catalogue, The..... 410
Life of Henry Ward Beecher..... 346
Locke, F. J.: Syllabus of Eclectic Materia Medica and Therapeutics..... 472
Losch, Henry: A German-English Medical Thesaurus..... 568
Long, J. W.: Syllabus of Gynæcology..... 346
Lynch, Lawrence L.: No Proof..... 760
McIlwraith, Thomas: The Birds of Ontario .. 121
Maclaren, Ian: Beside the Bonnie Briar Bush. 441
Malcom, David. A Fiend Incarnate..... 472
Medical Annual and Practitioners' Index. 247, 313
Medical Investigation Club: A Pathogenic Materia Medica..... 185
Michigan Board of Agriculture..... 122
Minot, H. D.: The Land and Game Birds of New England..... 312
Mitchell, John K.: Remote Consequences of Injuries of the Nerves..... 442
Mitchell, S. Weir: When the Woods are Green 58
Morris, Henry: Human Anatomy..... 185
Morrison, Arthur: Martin Hewitt, Investigator 185
National Formulary, an Epitome of the..... 696
New York Academy of Medicine, Transactions of the 697
Noiré, Ludwig: On the Origin of Language and the Logos Theory..... 154
Norton, A. B.: Ophthalmic Diseases and Therapeutics 90
Optic, Oliver: Brother against Brother..... 57
Parvin, Theophilus: Science and Art of Obstetrics 537
Phillips, Mrs. M. A.: The Birth of a Soul.... 58
Pinard, Adolph: De l'Agrandissement Momentané du Bassin..... 473

BOOK REVIEWS—*Continued.*
Proceedings of the American Academy of Railway Surgeons 537
Proceedings of the Fourth Annual Meeting of the Association of Military Surgeons..... 121
Purdy, Charles W.: Practical Urine-analysis and Urinary Diagnosis 90
Report of the Department of Health of Chicago for 1894..... 568
Rhodes, Samuel N.: Ord's Zoology 441
Ribot, Th.: The Diseases of Personality..... 410
Robinson, Byron: The Sympathetic Nerve... 506
Rohe, George H.: Text-book of Hygiene. ... 122
Romanes, George John: Thoughts on Religion. 473
Roosa, D. B St. John: Treatise on Diseases of the Eye..... 57
Roth, Otto: Modern Materia Medica..... 665
Russell, Dora: A Country Sweetheart..... 313
Russell, W. Clark: The Emigrant Ship..... 409
The Romance of a Transport 25
Sachs, B.: Nervous Diseases of Children..... 442
Sanger, Wm. W.: The History of Prostitution 633
Sampson, C. A.: Strength..... 568
Schimmelbusch, C.: The Aseptic Treatment of Wounds..... 472
Sir Francis Bacon's Cipher Story..... 473
Skene, A. J. C.: Medical Gynæcology..... 247
Skene, F. M. F.: Hidden Depths..... 58
Small, George: Anglo-Urdu..... 761
Sparhawk, Francis Campbell: Senator Intrigue and Inspector Noseby 567
Stedman, Thos. L.: Twentieth-Century Practice of Medicine 185, 247, 697, 760
Stelwagon, Henry: Essentials of Diseases of the Skin..... 122
Stephenson, Robert Louis: Treasure Island .. 346
Sternberg, Geo. M.: Immunity, Protective Inoculation in Infectious Diseases, and Serum Therapy..... 346
Stevens, A. B.: Manual of the Practice of Medicine..... 90
Stevens, John V.: The Annual of Eclectic Medicine and Surgery for 1894..... 473
Stewart, Wm. B.: The Practice of Medicine.. 25
Sudermann, Hermann: The Wish 761
Talbot, E. H.: Magazine of Travel..... 23
Taylor, Seymour: Index of Medicine..... 346
The Oldest Homœopathic Pharmacy..... 122
Thompson, W. Gilman: Practical Dietetics... 567
Thornton, E. L.: Dose Book and Manual of Prescription Writing..... 122
Topelius, Z.: The Surgeon's Stories..... 218
Tuckley, Henry: In Sunny France..... 90
Underwood, Francis H.: Doctor Gray's Quest 566
U. S. Commission of Fish and Fisheries..... 760
Van Dyke, Theodore S.: Game Birds at Home 567
Von Schrenck-Notzing, A.: Suggestive Therapeutics in Psychopathia Sexualis.....58, 346
Walsham, W. J.: Deformities of the Human Foot..... 410
Warren, John C.: Surgical Pathology and Therapeutics..... 312
Wilson, Edward L.: Cyclopædic Photography. 313
Witthaus, R. A.: Essentials of Chemistry and Toxicology..... 122
Witthaus, R. A., and Tracy C. Becker: Medical Jurisprudence, Forensic Medicine, and Toxicology..... 57
Whelpley, H. M.: Therapeutic Terms..... 122
Wimmer and Parsons: Physicians' Vade Mecum..... 185
Woolsey, Amy Howard: Hand Book for Hospitals..... 761
Zola, Emile: Lourdes..... 89

Borax, poisonous effects of..... 731
Bordeu, founder of vitalism..... 211
Botany, revival of..... 269
Bouchut..... 294
Bowel-obstruction..... 412
Brachial plexus, a case of localized neuritis of the 482
Brain, foreign body in..... 212
preparation, a permanent dry..... 735
pressure..... 732
injuries.....484, 630
Brandy, French..... 660
Bread and butter, the dangers of..... 53
Breech presentation, a sign of..... 64
Bright's disease.....339, 588
and elaterium..... 437
distilled water in..... 765
of lungs..... 588
treatment of..... 339
Broken heart..... 588
Bromidrosis in the royal family..... 629
Bronchial adenopathy, treatment of.....413, 765
Bronchiectasis, intra-pulmonary injections in... 698
Bronchitis, caffeine in..... 699
capillary—prescription for..... 637
chronic—banana juice for..... 93
cocillana in..... 157
nuclein in..... 569
of old age, menthol in..... 348
two mixtures for..... 221
Broussais and the physiological theory..... 271
Brown, John, and his theories..... 230
Bryonia.....157, 763
Buboes, treatment of..... 476
Bulson, Albert E.: Granular Conjunctivitis... 737
Burns, magnesium sulphate for..... 157
relief of the pain of..... 636
Burroughs, Samuel W.: Expert Testimony.... 225, 260
Butter, advantages of artificial..... 660
Butter *versus* margarine..... 375

Cacao—*see* Chocolate.
Cactus grandiflorus.....59, 124, 249
Cæsarean operation after version and decapitation..... 82
origin and re-establishment of..... 138
Caffeine.....502, 699
Cajeput oil.....571, 701
Calcium chloride.....60, 176, 570
Calculus, biliary.....353, 363, 589, 638, 690
in the stomach..... 640
intestinal..... 589
renal..... 341
Calomel.....150, 700
Campbell, Don M.: Gonorrhœal Conjunctivitis. 452
Camphor fiends..... 565
monobromate..... 381
to prevent conglomeration of..... 310
to pulverize..... 151
Canaliculus, slit the upper..... 763
Cancer, a new symptom of.....255, 607
and tubercle, combination of..... 672
belladonna for..... 285
duodenal..... 479
mullein oil in..... 61
of kidney, a case of..... 159
of uterus, the galvano-cautery in..... 645
ptomaine in the urine of a case of..... 480
thuja for..... 93
transmission of to animals..... 694
"Canker rash," treating..... 47
Cannabis, effects of.....27, 92, 250, 765
new preparation of..... 474
Cantharides.....217, 667, 733
Capillaries, discovery of..... 171
Capsules, gelatin—advantages of.....19, 177
Carbohydrates, physiology of the..... 96
Carbolic acid, antidote to..... 753
local application of..... 667
Carbuncle, to abort..... 187
Cardan, Jerome..... 141
Cardiac action of *Iberis amara*..... 413
dislocation, extreme..... 352
pain, cactus grandiflorus in..... 124
Carotid aneurysm, calcium chloride in..... 576
Cascara..... 382
Castor-oil emulsion, formula for..... 413
inunctions..... 93
Castration for enlarged prostate..... 244
shock in..... 416
See also Emasculation.
Cataract operations on animals..... 672
Cataracts..... 588
Catarrh, a spray for..... 444
nasal—prescription for..... 252
of naso-pharynx..... 347
of respiratory tract, chekan in..... 507
potassium bichromate in.....476, 571
Catgut sutures..... 343
Caulophyllum.....125, 155
Causes of death in the United States..... 22
Cedron..... 60
Celsus, influence of..... 35
Cemeteries and typhoid..... 478
Cerebral hemispheres, compensatory action of.. 223
localization, beginnings of..... 173
tumor in a child of eight years..... 303
Cerebro-spinal meningitis..... 401
Echinacea angustifolia in..... 286
hot baths in..... 284
Cerumen, impacted—relief of..... 412
Chalk muriate..... 125
Chancres, false..... 128
soft..... 637
Chancroid, golden-seal in..... 315
prescription for..... 733
Charitable institutions in Athens and Rome..... 43
Chaulmoogra oil..... 400
Chekan..... 381
"Chelsea Pensioner," the..... 572
Chemical or iatro-chemical "system"..... 176
Chemistry of the nineteenth century..... 269
in the body, revelations of..... 415
Chest, penetrating wounds of the..... 698
Chestnut leaves..... 763
Chickenpox, a fatal case of..... 54
Chilblains, application for..... 189
Chills, ætiology of..... 256
Chinese medicine.....3, 510, 541
Chionanthus virg.....250, 251
Chocolate..... 750
Cholagogue mixture..... 380
Chole-lithiasis..... 353
Cholera and the comma bacilli..... 342
in Paris..... 215
pathology of..... 625
prevention of in India..... 117
statistics..... 282
Chorea, Fowler's solution in..... 157
propylamine in..... 572
quinine in..... 668
treatment of..... 509
Chloasma, prescription for..... 508
Chloral, criminal use of..... 281
properties of..59, 93, 125, 186, 221, 242, 250, 379, 410, 540, 603, 605, 636, 667, 701, 716
Chloroform, action of on the stomach..... 188

Chloroform administration....188, 300, 381, 540, 628
anæsthesia, a point in..... 540
cocaine as a preparation for..... 765
fear in..... 694
asphyxia, to overcome..... 572
in labor..... 443
rationale of..... 698
peculiar death from..... 304
Chloroformization, sparteine in..... 125
Chlorosis.....316, 475, 660
CHRISTIAN, E. A: What Patients Should be Committed to the Asylum, and When?..... 77
Cimicifuga and caulophyllum..... 125
value of.....348, 374
Cinchona bark, introduction of..... 174
Cinnamon.....442, 444
Circulation, the—history of the discovery of.... 170
remarkable failures to discover 111, 113
Circumcision, easy method of..... 732
indiscriminate..... 605
City, a buried..... 439
Clematis erecta..... 189
Clergy, the, and medicine.....135, 143, 205, 375
Clinical-practice method, the..... 294
Clinical teaching, beginnings of..... 175
Coca, normal liquid..... 731
Cocaine anæsthesia.....348, 765
fatality..... 528
hypodermatically.....91, 765
inebriety..... 276
therapeutics of.....285, 667, 701
via the urethra causes death..... 640
Cocainism, chronic..... 59
Cochineal insects, interesting facts about..... 32
Cocillana, therapeutics of.....157, 569
Coction and crisis, ancient theory of..... 10
Code of ethics, a simple..... 753
Codeine..... 507, 596
Cod liver oil..... 286
alkaloids..... 116
new light on..... 179
what is it?..... 93
Coitus, lesions produced during..... 637
Colchicum..... 572
Cold extremities, chloral for..... 603
in the head, gelsemium for..... 669
therapy.....502, 702, 752
College of London founded by Linacre..... 110
Colles' fracture, pathology and treatment of.... 673
Collodion in anal fissure..... 61
Columbia Chemical Co..... 338
Columbus and the circulation..... 111
Commercial science..... 180
Communion cup, a patent..... 310
Competition in medicine..... 244
Conception in a woman with ovarian tumor..... 64
Conium, the dose of..... 240
Conjunctivitis, gonorrhœal..... 452
granular..... 737
Conscience and the vermiform appendix..... 51
Conservative therapeutics..... 248
Conservatism of English physicians..... 273
Constipation and Taka-Diastase..... 466
divulsion in..... 508
nux vomica in..... 349
of neurasthenics, chloral in..... 59
Consumption-cures, futility of..... 721
Consumption, Dr. Lawrence on..... 376
Consumptives and cold-water treatment..... 722
and creosote..... 723
cold air for..... 763
over-feeding of..... 722
See also Phthisis and Tuberculosis.
Convallaria, action of.....151, 316
COOPER, SIR ASTLEY..... 299
Co-operative medicine, or lodge practice..... 143
Copaiba..... 733
Copper sulphate..... 189
Corneal abscess, physostigmine in..... 149
ulceration, quinine in..... 701
treatment of..... 124
Corn-ergot..... 286
Corn-silk.....220, 731
Corns, simple treatment for..... 444
Cornutine citrate..... 508
Corpulence and arterio-sclerosis..... 745
CORR, A. C.: Emasculation and Ovariotomy as a Punishment for Crime and as a Reformatory Agency..... 714
Corset, evolution of the..... 511
Corsets and chlorosis..... 660
in France..... 118
Coryza remedies for.....251, 412
Cosmetic applications of electricity..... 645
Costumes of physicians in the eighteenth century. 267
Cotton-root.....509, 765
Cough and bronchitis, chronic—prescription for. 157
ammonium chloride better than opium in. 507
dry—*Lippia mexicana* in..... 93
indications for drosera and grindelia in.. 750
mixtures, danger of opium in..... 756
without opium..... 762
of phthisis..... 765
Cannabis sativa in..... 765
prescription for..... 765
remedy, a very simple..... 189
Couch grass..... 700
COWAN, FRANCIS PERCIVAL: A Novel Method of Assisting Uterine Inertia..... 459
CRAM, C. W: The Germ Theory of Disease..... 705
Cramp, *Euphorbia pilulifera* for..... 220
Cramps as a sign of diabetes..... 736
Cranial injuries, diagnosis of..... 484
Cream of tartar..... 508
Cremation..... 149
Creosote.....59, 285, 319, 723
Crises of disease..... 160
Croton chloral..... 91
oil..... 347
Croup in Upper Scandinavia..... 56
jaborandi in.....61, 765
medical treatment of..... 124
CULLEN, WILLIAM..... 210
Curare, a substitute for..... 638
Cuticura..... 726
CUTTER, EPHRAIM: Fatty Degeneration and its Masquerades..... 585
Cyanosis, congenital—a case of..... 487
Cystitis, valerianate of amyl to relieve the pain of..... 221
why remove the testicles in?..... 628
Cystoscope, the, as a diagnostic aid..... 449

Dandruff, cure for..... 699
DARWIN, ERASMUS..... 211
Dead bodies, scavengers of..... 117
Deafness, ætiology and prognosis of..... 768
protracted, followed by recovery of hearing..... 342
Death from embolism (?)..... 399
from rupture of splenic artery..... 557
rate in the French Army..... 244
simulation of by animals..... 691
faquirs..... 416
DE CHAULIAC, GUY..... 107
Debility, alstonia in..... 92
Deep breathing, how to practice..... 607
DE GRAAF, discoveries of..... 204

De Haen, founder of the Old Vienna School ... 210
Delivery-pan, a Spanish ... 287
Dentition troubles, camphor monobromate in... 381
Depilatory, a new ... 93
for surgical operations ... 381
Dermatitis herpetiformis ... 463
Dermoid cyst of anterior mediastinum ... 544
Devastation by war and pestilence in the sixteenth century ... 169
Diabetes, brewer's yeast in ... 602
cramps as a sign of ... 736
from mental shock, two cases of ... 127
jambul in ... 61, 155, 413
Taka-Diastase in ... 477, 528
test for ... 736
who contract? ... 56
Diagnosis and self-medication ... 46
points in ... 414
Diarrhœa and earth temperatures ... 574
danger in checking ... 512
in fowl ... 413
mixtures, Euthymol as an adjuvant in. 349
Diastase from fungi, the production of ... 382
Digestible food ... 726
Digestion of starchy foods ... 573
Digitalis ... 71, 149, 252
Diphtheria ... 217
a new application (Loeffler's) for ... 27
among fowl ... 56
and its associates ... 342
antitoxin as a culture medium ... 755
bacteriological diagnosis of ... 703
hints in the management of ... 571
lemon-juice in ... 349
Loeffler's solution in ... 540
menthol in ... 315, 604
nature of ... 223
nuclein in ... 571
pilocarpine as a prophylactic of ... 754
renal complications following the treatment of ... 91
serum treatment of ... 16, 127, 539, 764
sodium treatment of ... 92
specifics ... 157
treatment of ... 284, 349
Diphtheritic laryngeal stenosis, cantharidal collodion in ... 126
Disease as an entity ... 274
classification of Sauvages ... 209
Dissection, abatement of prejudice against ... 135
ancient prejudice against ... 9, 34, 43
for causes of disease ... 133
inaugurated by Herophilus ... 34
of animals ... 43
progress of ... 111, 112
Dissections in the eighteenth century ... 266
lingering prejudices against ... 205
Diuretic, *Eupatorium purpureum* as a ... 126
"Docking," cruelty of ... 534
tetanus from ... 562
Dogmatic school of medicine ... 6
Dogmatism in medicine ... 39
Douching, vaginal ... 64, 315, 701
Drops, the size of ... 599
Drugs, necessity of pure ... 406
too plentiful ... 215
Dry mouth ... 310
Dubois, anatomical work of ... 110
Duboisine ... 476
Duclos, C.: Treatment of Intermittent Fevers and Periodic Neuralgias by Apiol ... 391
Dude, defense of the ... 85
Dupuytren ... 297
Dysentery, a Persian remedy for ... 252
abroad ... 474
Dysentery, fruit in ... 474
on the Guinea coast ... 217
Dysmenorrhœa and electricity ... 643
apiol in—with cases ... 397
blue cohosh in ... 155
massage and other remedies for. 61
sanguinaria in ... 157
Dyspepsia, amylaceous—Taka-Diastase in... 400, 554, 558
flatulent—the old "Mistura Thomsonii" for ... 733
Pictet's cold cure for ... 256
Dyspnœa, quebracho in ... 188, 189

Ear diseases, pilocarpine in ... 666
Earache, causes and simple treatment of ... 765
inflammatory—veratrum viride in ... 286
Early rising, fallacy of ... 414
Echinacea augustifolia ... 286
Eclampsia, puerperal—treatment of ... 27
Eclectics, origin of ... 6
Eclecticism in medicine ... 40
Ectopic pregnancy, a remarkable case of ... 719
Eczema of glans penis ... 532
of the face ... 344
Eighteenth century—some medical leaders of the ... 232–235
Elaterium ... 437
Electric apparatus in a walking-cane ... 642
Electric-current accidents, treatment of ... 704
Electric outfit, cost of ... 641
Electrical execution ... 242
Electro therapeutics in general practice. 641, 643, 645
Elephantiasis of the extremities, rubber bandages in ... 765
Emasculation as a penalty for crime and as a reformatory agency ... 714
Embalming, three grades of ... 2
solution ... 698
Emmenagogue, apiol as an ... 397, 399, 402
oxalic acid as an ... 286
Polygonum punctatum as an ... 444
sanguinaria as an ... 669
Emotion, physiological effects of ... 415
Empedocles, sagacity of ... 7
Empirics, origin of ... 6
Empiricism as a school of practice ... 38
Empty capsules, how to employ ... 509
Empyema of the antrum of Highmore ... 374
of the knee, report of a case of ... 556
Endocarditis, acute rheumatic ... 762
Endometritis, local applications in ... 125
English surgeons, eminent ... 299, 300
Enlarged tonsils, ergot for ... 93
Entero-colitis of children, Euthymol in ... 540
Enuresis, nocturnal—ergot for ... 252
mechanical treatment of ... 762
Ephedra vulgaris ... 286
Epidemic of tonsillitis, a peculiar ... 290
Epigastric pain, electricity in ... 644
Epilepsy, absinthe in ... 764
ammonium muriate in ... 508
and undeveloped uterus ... 719
horse nettle in ... 411, 749
opium in ... 314
passiflora in ... 413
rational treatment of ... 635
the brain in ... 576
Epistaxis ... 220
electricity in ... 604
Epithelioma following skin-grafting ... 607
of face, lactic acid in ... 602
poke leaves in ... 380
treatment of ... 444
Erasistratus, discoveries of ... 34

Ergot...60, 93, 125, 188, 222, 252, 413, 508, 572, 723
of corn... 286
Erysipelas, absolute alcohol in... 667
boric acid in... 48
sparteine externally in... 92
toxin, failure of... 87
toxins... 375
Ether and albuminuria... 191
narcosis... 668
the blood in... 352
Ethyl bromide... 156
iodide...469, 569
Eupatorium perfoliatum... 61
purpureum... 166
Euphorbia pilulifera, preparation of... 220
EUSTACHIUS... 111
Euthymol...349, 540
Evolution, relics of... 254
Expectorant action of cocillana... 569
apomorphine as an... 221
Experimentation, unjustifiable... 630
Expert testimony...225, 260, 751
Exploratory operations, significant report on... 241
Eye and ear, study of in the seventeenth century... 173
artificial—risks in wearing... 241
diseases, deep-seated—sublimate injections in... 539
relation of occupation to injuries of... 490
the, in tuberculosis... 512
traumatic injuries of the... 490

FABRICIUS AB AQUAPENDENTE and embryology... 112
FABRICIUS HILDANUS, the "German Paré"... 112
FALLOPIUS... 112
Faquirs, simulation of death by... 416
Fatty degeneration and its masquerades... 585
Feather beds and sickness... 702
Fecundation, artificial... 116
Feigning of death by animals... 691
Ferment, an alcoholic—from fungi...382, 403
FERNEL, "the modern Galen"... 133
Ferratin...380, 751, 761
Fevers...477, 764
cerebro-spinal... 401
Indian remittent... 13
infantile—water in... 477
intermittent... 391
Nasa... 739
nature's method of reducing... 764
nuclein in... 732
pseudo-continued... 129
puerperal...49, 64, 187
remittent... 97
spotted... 401
typhoid—*see* Typhoid.
typho-malarial... 161
Fibroids and pregnancy... 255
electricity in the treatment of... 642
Figures that do not startle... 751
Filaria loa beneath the conjunctiva... 639
Fistula in ano...188, 634
Flute poisoning... 689
Fluxions, Hippocratic theory of... 11
Foods, scientific... 661
Foramen, a new... 352
Forceps, leaden... 629
Foreignism in American medicine...481, 503
Forests, hygienic influence of... 668
Fossil of pithecanthropus... 118
FOSTER, BURNSIDE: Spermato-Cystitis—a Neglected Complication of Gonorrhœa... 454
Fowler's solution... 157
Fractured arm, a convenience in cases of... 720
Fractures, mobility in... 156
FRANK, J. P.... 232
French surgeons of the early part of the century...297, 298
women and medical study... 119
Frontal sinus, empyema of... 608
Fruit-eating...384, 474, 475
Furuncles in crops, colchicum for... 572

GADDESDEN and the "king's evil"... 104
GALEN, career and teachings of... 36
Gall-stones... 589
from tight lacing... 638
treatment of...353, 690
Galvano-cautery supplied by street current... 646
value of the... 645
Gastralgia, evening primrose in... 604
no need of opium in... 507
Gastric concretion, a curious... 640
fever, pseudo-continued... 131
ulcer, potassium bichromate in...476, 571
Gelsemium...61, 286, 507
Genito-urinary action of staphysagria...126, 443
Germ pathology...214, 383, 576
a criticism by Lawson Tait... 28
not tenable... 705
Germs, the study of... 294
Ghost, was it a?...420, 526
Ghosts... 213
Glanders from horse-serum... 215
Glass houses... 239
Glasses, mistaken notions about... 461
Glaucoma... 588
a new operation for... 704
and scopolamine... 251
physostigmine in... 538
Gleet... 349
Glucose as a food... 704
Glycerin, exploitation of... 239
suppositories, agar-agar in... 756
in gynæcology... 26, 459
Goitre, digitalis in... 61
electricity in the treatment of...642, 643
ergot in... 413
exophthalmic... 672
pathology of... 557
potassium iodide in... 756
thyroid in the treatment of...477, 602
"Gold-cure" statistics... 661
victim, another... 55
Golden-seal... 315
Gonorrhœa, a neglected complication of... 454
abortion of... 475
and old age... 151
carbolic acid in... 509
cream of tartar in... 508
in women... 733
nuclein in... 469
saw palmetto in... 624
treatment of... 123
vesicarea in... 669
Gonorrhœal conjunctivitis...401, 452
Good hints... 477
GORDON, G. G.: Hysteria Due to Adhesions of Clitoris... 275
Grape-fruit... 475
Graves, Doctor, and dieting... 273
Gray hair, restoration of... 377
Greek medicine... 3
Green hair... 468
Grindelia...381, 750
Grip, boneset tea for... 61
GROSSMAN, RABBI LOUIS: Medicine among the Jews... 99
GUDDEN, B. G.: Diagnosis of Injuries of Cranium and Contents... 484

Guillemeau, obstetrics of 138
Gum boil, abortion of 316
Gums, the, in the diagnosis of phthisis 754
Gymnasia of Greece 8
Gynæcological diagnosis, purgation in 349
disorders, alstonia in 765
Gynæcology, demand for reform in 91
Gynocardia, oil of 157

Hæmaturia, cantharis in 733
Hæmophilia 189
Hæmoptysis, chloral hydrate in 125, 540
Hæmorrhage 60, 136, 509, 570, 604, 769
Hæmorrhoids, a study of the newer operations for 417
bleeding 668
chronic 669
horse-chestnut for 286
Hæmorrhoidal disease, nitric acid in 316
Hæmostatic action of calcium chloride 570
cotton root 509, 765
Lamium album 604
uva ursi 60
Haffkinism, failure of 243
Hair turned black by cold 752
Haller the Great 235
Hally, J. M.: Syphilis 368
Hamilton, John R.: Have We Any Medical Facts? 289
Hands, rheumatic and gouty 512
Haroun-al-Raschid and the healing art 65
Hay fever, *Aralia racemosa* in 349
"cure" again on the rounds 340
homœopathic cure for 217
menthol in 348
palliative treatment of 763
prescription for 540
sabadilla in 126
Headache, cannabis Indica for 27, 250
electricity in 644
See also Migraine.
Headaches from nasal trouble 254
Heart disease and thyroid 344
cactus grandiflorus in 59
calomel in 700
Heart, effect of bicycle-riding on the 474
failure 589
puncture, non-fatal 341
stimulant, strophanthus as a 699
tonic, *Apocynum cannabinum* as a 155, 750
tonics 251
trouble, bryonia in 763
convallaria in 151, 316
Heath, F. C.: Mistaken Notions about Glasses. 461
Helium, the discovery of 278
Helminthiasis 254, 671
Helonias 571
Hepatic colic, treatment of 570
Hepatitis and bilious fever 325
in Russia 217
Herbarium flowers, is oxalic acid a preservative of? 599
Hermes, encyclopædia of 1
Hernia cerebri 374, 668
omental—radical cure of 155
Herpes, arsenic in 316
Hiccough, tobacco-snuff in 145
High art and the daily press 305
Hippocrates, writings of 8, 9, 10
History of medicine, lectures on ..... 1 *et seq.*
Hoang nan 240, 241
Hoff, John van Rensselaer: Outlines of Sanitary Organization of Some of the Great Armies of the World ..... 513 *et seq.*
Hoffmann, biology of 209
Homem, Joao V. T.: Bilious Remittent Fever of the Tropics 321, 363
Pseudo-continued Fever 129
Simple Remittent Fever 97
Typhoid-Malarial Remittent Fever 161, 193
Homœopathic admissions 87
Homœopathy 270, 432
and "regular" medicine 469, 530
in Mexico 562
Hordeolum, boracic acid in 252
Horse-chestnut 286, 443
Horse-nettle 250, 411, 749
Horses, docking of 534, 562
Hospital statistics, disadvantages of 693
Hospitals in the eighteenth century 266
Middle Ages 108
Hottest years known to Europe 398
Huxley, Professor Thomas Henry 434, 445
Hydrastis 315, 765
Hydrocele, Bergman's operation for 315
operation for 380
painless injection of 700
Hydrophobia 216, 561
"an odious comparison" 404
in the Soudan 564
mortality 310
statistical report on 543
Hydrosalpinx, electricity in 644
Hydrotherapy 292
Hyoscyamine in lettuce 532
Hyoscyamus 60
Hyperpyrexia 662
Hypnotic action of lactophenin 764
Hypnotism, death from 56
Hypodermatic catharsis 55, 117, 381
syringe, the 406
Hypospadias, enormous 224
Hypothetical question in the Guiteau trial 227
Hysteria and marriage 149
apomorphine in 26
due to adhesions of clitoris 275
Hysteric simulation 767
Hystero-epilepsy from worms 254

Iatro-mathematical school, history of the 200
Iberis amara 413
Idealism in the eighteenth century 265
Ignatia 93
Immorality of the seventeenth century 206
Incompatibilities 310, 599
Index Medicus, the 20, 87, 305, 436, 437, 465, 502, 561, 597, 754
and medical bibliography 690
Indian medicine 2, 62
remittent fever 13
Indigestion, amylaceous 93, 252, 717
Inebriety 343, 663
Infant-feeding in France 672
Taka-Diastase in 669
Infant foods and malnutrition 149
gums, the lancing of 315
Infants, examination of 407
temperature and pulse of 249
Infantile constipation, cod-liver oil in 286
flatulent colic 381
Infectious diseases, causes and antidotes 158
Inflammatory diseases, nuclein in 733
fever 132
Influenza, cinnamon in 444
morbid anatomy of lungs after 190
Ingrowing toe-nail, simple method of avulsion .. 124
Injuries to hands, benzoin as an application in .. 221
Insane criminals—should they be executed? 596
reform in the treatment of 238
Insanity and marriage 56

Insanity abroad, causes of 16
diagnosis of 77
epileptic 92
Insomnia, chloral hydrate in 250
hop-picking for 219
Instruments of precision, invention of various .. 296
to clean rusty 756
Intermittent fevers, apiol in, with reports of cases 391
Intestinal anastomosis, the safest method of 477
concretions 589
diseases of children 539
obstruction, the treatment of 158
superdigestion 50
worms, wanderings of 671
Intestine torn away 656
Inverted retinal image, the 49
Iodine 316, 540, 701
Iodoform gauze, fraudulent 725
mental disturbance from 411
substitute 605
topical uses of 186
Ipecac 91, 374
Iron, action of on the organism 380
not to be administered in "biliousness" .. 344
preparations, value of 410
salts, cascara cordial as a vehicle for 381
tincture made pleasant 349
"Irritability" of Glisson and of Haller 174
Isopathy 270
Italian educational reform 119
Itching, *Cannabis Indica* for 92
Ivy poisoning, bean leaves for 444

Jaborandi 61, 187, 765
Jambul 61, 155, 413
Jaundice after male-fern 605
Chionanthus virginica in 250
JENKS, EDWARD W.: Clinical lecture 719
Jews and the medical profession 267
medicine among the 99
Joint diseases, electricity in 643
JOUBERT 143
Juvenile pronunciation 604

Kala azar in Assam 670
KARNIK, FRANZ: Contribution to Ætiology of Mediastinal Tumors 619
Keeley graduates 598
Keith, Dr. Thos.—obituary 691
KESTELL, J. R.: Psoriasis 424
Kidney, new method of anchoring 538
KISCH, E. HEINRICH: Corpulence and Arterio-sclerosis 745
Kola—what is there to it? 52, 371
KRAUSS, WM. C.: Localized Neuritis of the Brachial Plexus 482

Labor, chloral and ipecac in 716
chloral hydrate in 221
chloroform in 443
gelsemium in 61
glycerin suppositories to promote 459
height of the fundus during 671
tartar emetic in tedious 732
the Walscher position for 703
uselessness of the vaginal douche in .. 64, 701
Ustilago maydis during 220
Lacing and calculi 638
Lactation, how to increase 27
Lactophenin 92, 219, 764
LAENNEC 295
Lamium album 604
LANFRANC 106
Language, a universal 182
Laparotomy under gaslight, danger of 224
Larynx, innervation and neuro motory disturbances of the 387, 427
Late suppers 606
Leeches, how to apply 477
in 1833 271
prussic acid, and cantharides 217
LEES, R. COWAN: Amylaceous Indigestion 717
LÉONICENUS, NICHOLAS 109
Leprosy and chaulmoogra oil 400
hoang nan in 241
in India 341
in India and the Sandwich Islands 56
in Russia 216
in the Middle Ages 108
in the United States 565
observations on 576
Lettuce 532
Leucorrhœa: causes, varieties, and treatment ... 330
in the unmarried 347
Leukæmia, arseniate of soda in 123
Library of Alexander 33
Lippia mexicana 93, 316
Liquor law in Russia 693
potassa 636
sedans 219
traffic—the Denmark law worthy of trial 559
LISTER, SIR JOSEPH 295
Lithia-water fallacy 244, 604
Liver, glycogenic function of 96
tenderness, *Chionanthus virginica* in 251
Lochia, to re-establish 572
Locomotor ataxia, a new sign in 640
early symptoms of 477
ergot in 572
influence of syphilis on 507
points on diagnosis of 608
suspension superseded in 538
Locked nymphæ 86
Lodge practice 692
Longevity and activity 661
extraordinary .. 86, 308, 439, 470, 531, 693
in France 693
LOUIS 272
Low vitality of the poor 86
Lubricants in gynæcology 475
Lumbago, electricity in 645
Lung gangrene, intra-pulmonary injections in .. 698
gymnastics 736
Lupulin, remarkable dose of 239
Lupus, cantharidin in 667
vulgaris, the burning-glass in 762
Lymph, gradual characterization of 172
Lymphatic swelling, aconite root for 699

MCLAUTHLIN, H. W.: Case of Congenital Cyanosis 487
MADDEN, THOMAS MORE: Leucorrhœa: Its Causes, Varieties, and Treatment 330
Mad-stone humbug, the 766
MAGENDIE 272
MAIRE, L. E.: Sympathetic Ophthalmia 80
Malaria and angina pectoris 256
and microbes 768
nuclein solution in 27
quinine in 464
Malarial fever, nuclein in 605
pseudo-continued 130
Malarious fevers, *Boletus laracis* in 251
Male-fern, administration of 186
poisoning by 407, 605, 636
Malignant diseases in animals 242
tumors, treatment of without the knife 656
Mankind and bacteria (poem) 460

MANTON, W. P.: Note on Menopausal Polysarcia Abdominalis 420
Margarine *vs.* butter 469
Marriage, evils of modern 693
the proper age for 726
Masquerades of fatty ills 587
Masturbation and the schools 147
Mattei-ism. 270
Measles, complications of 748, 764
Mechanical aids in medicine 269
Mediastinum, phlegmon of 735
tumors of 544, 619
Medical anarchy in Rome 42
bibliography and the Index Medicus 690
courtesy 434
facts, have we any? 289
fees in the eighteenth century 267
in the seventeenth century 206
necessity of demanding 598
heroism in the Chino-Japanese war 694
history, importance of 257
journalism, past and present 559
jurisprudence 175
literature 626
success, the secret of 754
terms, shall they be latinized? 726
Medicine among the Jews 99
and the church 70
episodic 496
historical beginnings of 1
MENDENHALL, J. N.: Paraplegia following Typhoid Fever 524
Meningitis, a sign of non-tuberculous 572
an early sign of 384
ergot in 723
localized—blister for 477
tubercular. 285
See also Cerebro-spinal meningitis.
Menopausal fat-accumulation 420
Menorrhagia and metrorrhagia, prescription for. 286
Menstruation, apiol as a regulator of 399
in a child 192
influence of climate on 672
Mental shock resulting in diabetes, two cases of. 127
therapeutics 285
Menthol, therapeutics of 348
Mercuric chloride 308, 539
MESMER, methods of 229
Metaphysical speculations of the eighteenth century 207
Methodism in medicine 6, 39
Microbe man, the 735
Microbes and disease demons 662
Migraine, intermittent—gelsemine in 286
saw palmetto in 96, 349
Milk diet in typhoid overdone 286
fallacies concerning 575
the casein of 736
MITCHELL, M. R.: Neurology of the Female Reproductive Organs 521
MITRA, N. C.: Chloral and Ipecac in Labor 716
Indian Remittent Fever 12
Nasa Fever of India 739
Mole, a human 406
Monkeys, reported sagacity of 242
Monroe doctrine, the, applied to the physician .. 481
MOONEY, J. J.: Dermatitis Herpetiformis 463
MORGAGNI, career of 236
Morphine, action of on intestinal peristalsis 573
benefits and evils of 405
habit, treatment of the 404
hypodermatically 316
Morphinism, chronic 59
Morphinomania 159
increase of 216
MOULTON, H.: Traumatic Injuries of the Eyes. 490
Mouth-breathing and pneumonia 512
Mouth-wash, an aromatic 507
Movable kidney, the frequency of 478
Mudar plant, the, and its properties 667
Muira-puama, therapeutics of. 25, 400
Mullein oil 61
Mumps 480
Murmurs in heart and vessels, cause of 735
Murphy button, objections to the 477
"Mushroom" and "toadstool" poisoning .. 152, 381, 509
Mushrooms and toadstools, how to differentiate. 152
Mydriasis by scopolamine. 251
Myomata of the bladder 767
Myopia, astigmatism as related to 63
Myxœdema, thyroid in 603

Nævus, treatment of 538
Nail-biting 694
Nail in his skull thirty years 630
Nasa fever of India 739
Nasal obstructions removed by galvano-cautery knife 646
Natural history, the school of 274
philosophy, the school of 273
Nephrectomy, abdominal, with report of case ... 385
Nephritic colic, to relieve the pain of 221
Nephritis, santonin in 443
Nerve tonic action of alstonia 61
Nerves, action of santonin on the 443
and tendons, ancient confusion of 173
of sensation and motion, Sir Charles Bell's discovery concerning 273
Nervous diseases 633
one reason for the preponderance of 191
"Nervousness," passion flower for 572
Neuralgia, aconite in 572
facial—spigelia in 349
nitro-glycerin for 381
ovarian and uterine—electricity in ... 643
periodic—apiol in, with reports of cases 391
ergot in 125
Neurasthenia 503
apomorphine in 26
nuclein in 569
Sir Andrew Clark's favorite prescription for 125
Neuritis, localized, of the brachial plexus 482
Neurology of the female reproductive organs ... 521
Neuro-motory disturbances of the larynx ... 387, 427
Neuroses due to gastric derangement, a recipe for the treatment of 464
with constipation, prescription for ... 126
New diseases of the Renaissance 139
"New" medicine 594
New remedies, uncertainties of 20
Nicotine fumigation, danger in 755
Night sweats, ergot in 188
hydrastis in 765
Nitro-glycerin, use of 91, 310, 508, 666
Nitrous oxide, death under 412, 691
Nomenclature, mongrel 599
new 32
Nominalists 70
Nose, a broken 755
Nostrum, formula of the 54
traffic, suppression of 181
Nostrums, advertising of 240
Notoriety, how secured 470
Nuclein 575, 669
a correction 115
caution 85

Nuclein experience..... 558
from yeast..... 501
in acute pneumonia..... 527
in bronchitis..... 569
in diphtheria..... 571
in enlargement of spleen..... 558
in fever..... 732
in gonorrhœa..... 469
in inflammatory diseases..... 733
in malaria..... 27
in malarial fever..... 605
in neurasthenia..... 569
in rheumatism..... 569
in syphilis..... 558
in tonsillitis..... 569
in toxæmia..... 732
in tubercular degeneration of cervical glands..... 559
in tuberculosis..... 475
in typhoid fever..... 27
solution in typhoid, malaria, etc..... 27
the use of..... 180
therapeutics of..... 436, 569, 732, 733
Numbers, cabalistic significance of.....7, 11
Numerical method, the, in pathology..... 272
Nursing mothers..... 540
Nux vomica..... 349

Obesity, the rôle of fluids in..... 127
the treatment of 347
thyroid extract in..... 248
thyroid in..... 180
Obstetric aphorisms..... 699
Obstetrics in the seventeenth century 175, 204
of Jacob Guillemeau..... 138
Occultism and medicine 140
Ocular ballottement 64
fatigue..... 640
tension, increased..... 192
O'Donovan, D.: Paralysis..... 748
Offspring of young mothers..... 320
Oil, chaulmoogra 400
croton 347
cod-liver—*see* Cod-liver.
gynocardia..... 157
turpentine..... 286
Old age, contemporary examples of. ...86, 181, 182
See also Longevity.
Oldest negro woman in America, death of the .. 86
Oleomargarine, the constitution of..... 539
Onions in therapeutics..... 571
Operations, the itch for..... 692
Ophthalmia, sympathetic..... 80
Opium.....281, 308, 314, 507, 756
habit cured by the penitentiary..... 598
Opotherapy..... 756
Orchitis, *Clematis erecta* in..... 189
electricity in 643
oxalic acid in..... 381
phytolacca for..... 219
value of bismuth in..... 189
Organizations, medical, in the United States.... 269
Oribasius, wisdom of 41
Ornithology, a curious phenomenon in..... 563
Ornithorhynchus, poison glands of..... 766
Otitis media, tetra-borate of soda in..... 377
Ouchterlony, John A.: On Chole-lithiasis.... 353
Ovarian tumor and conception 64
Ovariotomy and sexual appetite 544
and the voice..... 544
as a penalty for crime and as a reformatory agency..... 714
the first..... 297
Owen, Orville W.: The Monroe Doctrine Applied to the Physician 481
Owen, Richard—sketch of..... 350
Oxalic acid 286
Ox-gall..... 155
Oxytocic action of ipecac..... 91
Ustilago maydis 286
uva ursi..... 60
Oysters a foot wide..... 243

Pain in the back, electricity in. 644
Pains of spine and of hip disease, localization of. 540
Palatability and dosage..... 149
Palatine glands, structure of..... 96
Palmer, Dr. B. W.—obituary 49
Paracelsus, career of 141
Paralysis and sex..... 56
following measles 748
of healthy muscles, electricity in..... 645
Paraplegia following typhoid fever..... 524
strychnine in..... 349
Paré, Ambrose.....136–138
Park, Roswell: Lectures on the History of Medicine. 1, 33, 65, 103, 133, 167, 200, 229, 265, 292
Parotitis, phytolacca in..... 219
Parturiunt Montes, Nascetur Ridiculus Mus.... 83
Passiflora incarnata (Passion flower) ...413, 509, 572
Pasteur victim, another..... 216
Patella, total extirpation of..... 253
Patent and proprietary medicines 118, 594
medicines, decline in the sale of..... 54
Patents from abroad..... 628
Pathological studies in France..... 271
Paulus Ægineta, labors of..... 42
Pelvic congestion, saw palmetto in 509
disease, liquor sedans in 219
Penalties for unsuccessful surgery 71
Peptone and coagulation 736
Percussion..... 295
Perineal laceration, complete—operation for.... 328
Perspiration, profuse—picrotoxin in 443
Pertussis, belladonna in 669
See also Whooping-cough.
Pessaries, precautions in the use of..... 117
Peterson, Reuben: Abdominal Nephrectomy, with Case..... 385
Pharmacy, beginnings of..... 43
Philosophical tendencies in the nineteenth century..... 268
Phlebotomy, the therapy of 314
Phrenology..... 270
Phthisis and bedbugs..... 564
and negroes..... 503
Cannabis sativa in 765
creosote in 59, 285, 309
dietetic treatment of..... 186
Doctor Volland on the treatment of.... 721
from cohabitation 151
prescriptions for..... 476
See also Consumption and Tuberculosis.
Phulluah 380
"Physicians"—an epigram 694
"Physiological medicine"..... 292
Physiology and the public schools..... 307
Physostigmine 147. 538
Phytolacca, therapeutics of..... .....219, 380
Pichi..... 602
Pick-me-up..... 381
Picrotoxin.....186, 443
Pigmy pigs..... 599
Pills and insoluble medicaments..... 372
Pilocarpine 61, 157, 669
Pineapple..... .....93, 666
Pinel..... 230
Pioneer practice in the Northwest..... 456
Pithecanthropus..... 118
Placenta containing phosphate of lime 528

Plantago 508
Plater, pioneer work of 134
Plato and his successors 12
Pleurisy root 152, 540
Pneumonia 425
acute—nuclein in 527
calcium chloride for 60
catarrhal—veratrum in 60
digitalis in 149, 252
in the aged, prescriptions for 124
jaborandi in 187
of children, the cold bath in 702
oil of cajeput in 571, 701
pleurisy root in 152, 540
self-limited? 32
specific 189
strychnine in 754
treated with ice 502
Poison glands in snakes, results of extirpation of 224
of the ornithorhynchus 766
Poisons, action of the liver on 255
rare antipodeal 306
Poisoning by aloes 54
benzin 250
chloral, liquor potassæ in 636
cocus or grenadilla wood 689
male-fern 636
mushroom, *see below*, "toadstool."
nitrous-oxide 412
nutmegs 123
quassia 116
rhus 464
treatment of 539
serpent venom 145, 508, 574
sponge 119
strychnine 765
tarantula 60
"toadstool" 152, 381, 509
Poisoning, fallacy of potassium chlorate in 605
Poisonous food, effects of 32
Poke root—*see* Phytolacca.
Polygonum punctatum 444
Polypharmacy of Sydenham 202
Polysarcia abdominalis, menopausal 420
"Popular errors," Joubert's popular treatise on. 143
Porous glass for windows 119
Post-partum hæmorrhage, how to check 604
Potassium bichromate 476, 571
bitartrate 508
iodide 756
permanganate 627
Poultice, the, non-pathogenic 750
Powe, Darius L.: Pneumonia 425
Precociousness extraordinary 726
Pregnancy and dental caries 288
and fibroids 255
drugs contra-indicated during 605
headaches of 128, 503
of eleven months 64
quinine during 156
the glycosuria of 224
Prescription, a unique 503
Priapism in leukæmia 608
Price, Joseph: Operation for Complete Perineal Laceration. 328
Priests, early association of with medicine 2
Primæ viæ, cleanse the 512
Primrose, evening 604
Professional honor, the price of 628
Prolapsus uteri, electricity in 644
Prolificness, newspaper reports of 439
Proprietary medicines "through pharmaceutic channels" 594
Propylamine 572
Prostatic disease 672
Prostatic enlargement, a suggested operation for. 221
cocaine injections for. 285, 701
treatment by ligature and division of vas deferens 512
Prostitution, a cause of 694
in India 309
Pruritus ani et vulvæ, application for 444
hydrochlorate of chalk for 125
Pruritus vulvæ, helonias in 571
Pseudo-chancres 128
Pseudo-continued fever 129
Pseudo-medical science, a review of 383
Psoriasis, an obstinate case of 424
treated by copaiba 733
Psychological mystery, a 420
explained 526
Pterygium, bichloride or opium in 308
curetting cornea in 603
Ptosis, operation for 669
Puerperal douching 64
eclampsia, veratrum viride in 49
septicæmia, cold bath in 187
Pulmonary catarrh, chekan in 381
Pulsatilla 126, 701
Purpura, oil of turpentine in 286
Puzzles for medical men 279
Pythagoras 6, 7

Quackery encouraged in a medical periodical ... 52
Quacks abroad 340
Quassia 116, 636
Quebracho 188, 189
Queen of the meadow 166
Quinine, administration of. 156, 464, 469, 605, 668, 701
as a panacea 239
best forms of 188, 380
salts, cascara cordial as a vehicle for .. 381
Quintuple birth 599

Rabies and the Pasteur institute 281
supposed 309
See also Hydrophobia
Rachitis and scorbutus in the young, differentiation of 519
Rademacher's three universal remedies 292
Raugé, P.: The Neuro-Motory Disturbances of the Larynx 387, 427
Realism in medicine, beginnings of 169, 230
Realists 70
Rectal absorption 672
feeding 251
medication 55
prolapse 32
a clinic case of 720
resection 192
vaginal method of 412
Red spots on the cheek as a diagnostic datum ... 607
Relic worship, the evolution of 591
Religious preponderance in medical practice 42
Remittent fever 97
Remondino, P. C.: A Page from the History of Ancient Medicine 616
Medical History, and its Importance 257
The Evolution of Relic Worship—a Page from the History of Medicine 591
Renal calculus simulating anal fissure 341
casts, clinical value of 128
pathology 606
Reprint, abuse of the 113
Respiration at high altitudes 384
study of, in the seventeenth century. 172
suggestions regarding 491
Respiratory affections, belladonna in 249
caffeine in 699
grindelia in 381

Respiratory capacity 608
Rhazes the "Experienced" 66
Rheumatic arthritis, a simple application for 605
endocarditis, acute—treatment of ... 762
Rheumatism, cimicifuga in 348
lactophenin in 92
nuclein in 569
Oleum gynocardiæ in 157
phytolacca in 219
pilocarpine in 61
sodium salicylate in 635
Rhinitis, atrophic—zinc stearate in 660
Rhus Toxicodendron 316, 539, 464
Rickets in negroes 256
Ringworm, application for 413
croton oil for 347
management of 540
of the beard, prescription for 701
RININGER, E. N.: Suppression of Urine for Forty-eight Days 525
ROBBINS, FREDERICK W.: The Cystoscope and its Limitations as a Diagnostic Aid 449
Robert Louis Stevenson on the medical profession 128
Rocking-chair therapeutics 182
RODMAN, WM. L.: Empyema of the Knee 556
Roger Bacon 69
RUSSELL, W. B.: Some Suggestions regarding Respiration 493

Sabadilla 126
SAMSON, JAMES: Co-operative Medicine, or Lodge Practice 143
Sanguinaria 157, 669
Sanitary organization of some of the great armies ..... 513 *et seq.*
of the Austro-Hungarian Army 609, 646
of the British Army. 648, 681
of the French Army 577
of the German Army 583
of the Italian Army 517
of the Russian Army 513
of the Swiss Army 545
of the United States Army 683, 709
Santonin 443
Sarcoma, arsenic in 605
Saw palmetto 96, 349, 509, 602, 624
Scandinavian medical laws 242
Scarlatina, chloral in 251, 605
School of Alexandria 34
Montpellier 103
Rational Medicine 292
Salernum 71
Sciatica, deep injections in 304
Science and demonology 269
Scopolamine 251
Scorbutic manifestations in the young 519
Scorbutus, infantile 529
Second sight, a case of 755
Sedative action of *Passiflora incarnata* 157
Self-medication 46
Seminal emissions, hyoscine in 380, 572
SEMMOLA, MARIANO: The Pathogenesis of Albuminuria 300
Senile heart, diet rules in 765
Sensitive plant, brains of the 470
Serpent poison and poisoning 145, 508, 574
Serum, non-immunized 407
therapy 497, 539
Hansemann on 16
SERVETUS and the circulation 113
Seventeenth-century notables 169
Sex in eggs 376
Sextuplets, a case of 416
Sexual anomalies in women 703
disturbances, staphysagria in 443
organs, neurology of the 521
torpor in the female, treatment of 761
Shaddock (grape-fruit) 475
Shepherd's purse 570
Sick-room temperature, how to reduce 477
Silk *vs.* catgut 509
Simaba Cedron 60
Similia similibus 432
SIMPSON, SIR JAMES Y., and chloroform 300
Skin affections, belladonna in 124
familiar designations for 223
iodine in 701
SKODA 274
Skunk oil 243
Sleepy grass 725
Smallest man, the 217
Smallpox in Little Thibet, an epidemic of 317
SMITH, A LAPTHORN: Electro-therapeutics in General Practice 641
Snake-bite, strychnine in 508
Snake-poison antidotes 574
Sodium arseniate 123
chloride 733
iodide 393
salicylate 477, 635
tetra-borate 377
Soft corns, treatment of 540
Solidism of Cullen 210
Sordes, solvent for 700
Sore feet from walking 189
throat, phytolacca for 219
Sour-wood 157
Spain, surgical backwardness of 299
Sparteine 92, 125
Specialism in Germany 272
Spermatic neuralgia, oxalic acid in 381
Spermato-cystitis, a complication of gonorrhœa. 454
Spermatorrhœa, prescription for 509
Spigelia 349
Spinal cord, irritation of 672
Spleen-enlargement, nuclein in a case of 558
Spleen-rupture during coitus 224
STAHL, doctrines of 208
Staphysagria 126, 443, 448
Steel instruments, how to make them bright as new 151
Stethoscope, invention of the 295
Still-born, resuscitation of the 571
"Stimolo" and "Contrastimolo" 270
STOCKWELL, C. M.: Colles' Fracture 673
Stomach-dance in therapy 118
Stomach, healthy—contents of 575
the juices of the 480
Strange disease in Dublin 150
Stricture, electricity in 643
of urethra, saw palmetto and pichi in . 602
Strophanthus 60
action of 699
Strychnine ... 70, 91, 117, 279, 349, 381, 508, 756, 765
Cannabis Indica as an antidote for ... 765
croton-chloral as an antidote for 91
Student life in the sixteenth century 168
Sundew, value of 750
Superfœtation, a case of 255
Supra-renal capsules, functions of 256, 606
Surgeon and physician, relations of in the eighteenth century 267
Surgery, history of in the seventeenth century .. 202
in England 299
in the Middle Ages 135
in the present century 296
overdone 244

Surgery, unjustifiable 320
Surgical shock, atropine in 189
practice, defects in 544
technique, the dark side of 563
SUTTIE, GEORGE: Taka-Diastase 554
Sydenham, career of 201
SYME 300
Syncope, amyl nitrite in 507
Syphilis among the Innuits 148
and tabes dorsalis 507
berberis in 444
extra-genital 768
history of 139
in Greenland 56
in the army *vs.* licensed prostitution 768
nuclein in 558
of the heart 160
vs. sentimentalism 21
with reports of three cases 368
Syphilitic ulcers, sulphate of copper for 189
Syphilitics discharged from hospital, a useful card presented to 479
Syrup of hydriodic acid 636

Tablet craze, the 406
triturates 55, 160
a good servant but bad master .. 689
Tablets, insoluble 372
of narcotic tinctures 280
Tachycardia, strychnine in 349
Tænia 92, 114, 181, 242, 540, 763
Taka-Diastase 382, 403, 466, 574
and dyspepsia 400
Doctor Lascar on 603
in amylaceous dyspepsia 400, 554, 558, 717
in constipation 466
in diabetes 477, 528
in infant-feeding 669
therapeutics of 554, 558
vs. malt extract 570
Tapeworm in an infant 242
iodine for 540
mignonette for 92
prescription for 181
pumpkin-seeds and thymol in 763
treatment of 114
Tapping the heart 341
Tarantula bite, cedron for 60
Tartar on the teeth, how to treat 252
Tattoo marks, how to remove 444, 572
Teeth, decay of, during pregnancy 288
effect of sugar on the 755
to prevent decay of 668
Temperature in sick-room 477
Testis in the perineum 670
supernumerary 256, 304
Testicular pain, electricity in 644
Testimonials as assets 693
Tetanus, chloroform in 188, 381
Texas overstocked with doctors 216
THEMISON, nosology of 39
Theory of "excitement" 270
Therapeutic failures 629
fallacies 244
Thermometers, invention of 201
"Thompson's Mixture" 733
Thuja occidentalis 93
Thymus serpyllum 637
Thyroid feeding, the dangers of 764
in goitre 477
in myxœdema 603
in obesity 180, 248
therapeutics of 602
toxicity of 412

Tibia, substitution of fibula for 736
Tight lacing and nitrous oxide result in death ... 412
Tinned foods, hints as to 534
Tinnitus, treatment of 348
Toadstool poisoning, strychnine in 381
Tobacco 145, 316, 348, 502, 755
habit, *Ignatia amara* for 93
"To Make White Crows or Ravens" 181
Tongue, the—what it indicates 608
Tongue-traction method applied to birds 608
Tonic effect of grape-fruit 475
Tonsillar hypertrophy 736
iodine in 316
Tonsillitis, nuclein in 569
obstinate—sodium salicylate in 477
Toothache, passiflora in 509
plantago in 508
Tooth-paste, a valuable 629
Torture in the eighteenth century 207
Toxæmia, nuclein in 732
Toxins and antitoxins—"Cycle Therapeutics" .. 725
TRAVERS, BENJAMIN 273
Trephine, first use of in the United States 119
Trillium pendulum 349
Triticum repens 700
Trousseau 272
Truss, a Carthaginian 533
Tubercle and cancer, combination of 672
Tubercular degeneration of cervical glands, nuclein in 559
peritonitis, action of air in 220
Tuberculosis, nuclein in 475
sea air in 608
the eye in 512
See also Consumption and Phthisis.
Tumors, dispersible 416
of mediastinum, contribution to the ætiology of 619
the galvano-cautery in amputation of .. 645
Turpentine 286
Typhoid and typhoid-malarial fevers 161
fever 463, 634
albuminuria in 416
and cemeteries 478
chloral in 242
chloroform and carbolic acid in ... 628
diet in 635
nuclein solution in 27
ox-gall in 155
paraplegia following 524
remedies in 732
report of two cases of 195
the Woodbridge treatment of 465, 624, 721
treatment of 509
Typhoid-malarial remittent fever, with cases . 161, 193

Ulcerations, quinine for 605
Umbilical channel for urine 639
Undertakers as school trustees 406
Universities, foreign—decline in the number of . 269
of the eighteenth century 207
of the thirteenth century 105
Uræmia, cerebral 671
couch grass in 700
treatment of 666
Urea, formation of 64
Ureter implanted in the bladder 736
Urethral contusions and lacerations 220, 667
discharge, chronic 444
injections 314
Urethritis, citric acid in 637
Uric acid, shepherd's purse in the therapy of 570
Urinalysis, a possible error in 674
Urinary alkalinity treated by amyl nitrite 471

Uninary fœtor, oil of cinnamon in 444
Urine incontinence, cystoscopy in 539
pseudo suppression of 623
retention, hyoscyamine in..... 60
in the new born..... 126
suppression for 48 days, relieved by electricity..... 525
test for bile in..... 672
Urticaria, pilocarpine in 157
Uteri, didelphic, with hæmatokolpos and pyokolpos..... 512
Uterine affections, cornutine citrate in..... 508
and bladder trouble, codeine and gelsemium in..... 507
atony, electricity in 644
contractions, to promote 310
enlargement, *Trillium pendulum* for.... 349
fibroma, thyreoidin for..... 733
hæmorrhage, strychnine in..... 117
inertia, ergot in 93, 349
sedative, black haw as a 123
sound, be careful with the..... 534
Uva ursi compared with ergot..... 60

Vaccination, a suggestion to the opponents of .. 630
"arguments" against 53
history of..... 237
in Little Thibet..... 317
proof of the value of 607
the scraping process in 411
Vagina, absorptive power of..... 192
Vaginal casts, half a hundred..... 576
discharges, significance of..... 731
douche, uselessness of the..... 701
douches of hot water..... 315
Van Swieten..... 210
Varicella 477
Varices of the œsophagus..... 256
Varicocele, ligation in 316
Varicose veins, ergot in the treatment of..... 222
new operation for..... 189
operation for.....700, 764
Varicosities, fluoric acid for..... 733
pulsatilla in..... 701
Venereal diseases, ancient confusion of 139
Veratrum..... .....60, 149, 286, 381
Veritas Vincit..... 529
Versification, medical, in the seventeenth century 204
Vesalius, independence of..... 111
Vesical irritability, prescription for..... 252
Vesicant, chloral as a..... 701
Vesicarea..... 669
Veterinary practice, calomel in..... 150
Viburnum, therapeutics of.....123, 700
Villeneuve, Arnold, and alcohol..... 104
Virchow and modern vitalism..... 293
Visits, necessity of frequent..... 503
Vitalism 211
Vomiting, nitro-glycerin in 91
of pregnancy, menthol in 477
Von Helmont, the "system" of 176
Von Rokitansky 274

Walling, P. A.: Pioneer Practice of Medicine in the Northwest..... 456
Ward, E. B.: Mankind and Bacteria—a Historical Legend 460
Warts, application for 157
may be removed by the galvano-cautery.. 645
Werlhof..... 232
Whitehead's operation for hæmorrhoids. 418
Whooping-cough, belladonna in..... 249
chestnut leaves in 763
chloral in..... 410
citric acid in 117
cocaine in..... 667
menthol in..... 348
prescription for..... 252
Thymus serpyllum in 637
See also Pertussis.
Wichman 232
Williams, J. Jr.: Cerebral Tumor in a Child of Eight Years..... 303
Windsor Medical Association 401
Winter cough, *Lippia mexicana* in 316, 381
Wise, John C.: A Consideration of Scorbutic Manifestations in the Young Subject..... 519
Women in medicine 74, 755
Wonderful pathology..... 468
Worms in children, Deray's favorite prescription for 251
Worthington, Doctor E. D.—obituary..... .. 177
portrait .....facing 161
Wound-dressing, calomel as a..... 732
phytolacca as a 219
sulphur as a 316

Yeast..... .....60, 602
Young, W. H. A.: Typhoid Fever..... 463

Zimmermann 232
Zinc stearate 660
Zoölogy, advances in..... 269

The Medical Age.

VOL. XIII. DETROIT, JANUARY 10th, 1895. NO. 1.

Original Articles.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

Of the origin of medicine but little need be said by way of preface, save that it must have been nearly contemporaneous with the origin of civilization. The lower animals when sick or wounded instinctively lessen or alter their diet, seek seclusion and rest, and even in certain cases seek out some particular herb or healing substance. Thus, too, does the savage in his primitive state; and experience and superstition together have led nearly all the savage tribes into certain habits and forms in case of injury or disease. But for us the history of medicine must necessarily begin with the written history of events, and its earliest endeavors need detain us but a very short time. Its earliest period is enveloped in profound obscurity, and so mingled with myth and fable as to be very uncertain. It embraces an indefinite time, during which medicine was not a science, but an undigested collection of experimental notions, vaguely described, disfigured by tradition, often made inutile by superstition and ignorance. The earliest records of probable authenticity are perhaps to be met with in the Scriptures, from which may be gathered here and there a fair notion of Egyptian knowledge and practice. Thus we read that Joseph commanded his servants and physicians to embalm him—this being about 1700 B. C. It shows that Egypt at that time possessed a class of men who practiced the healing art, and that they also embalmed the dead, which must have both required and furnished a crude idea of general anatomy. We are also informed from other sources that so superstitious were the Egyptians that they not only scoffed at, but would stone the embalmers, for whom they had sent, after the completion of their task. The probably mythical being whom the Egyptians called *Thoth*, whom the Greeks named *Hermes*, and the Latins *Mercury*, passed among the Egyptians as the inventor of all sciences and arts. To him are attributed an enormous number of writings concerning all subjects. Some have considered him as identical with Bacchus, Zoroaster, Osiris, Isis, Serapis, Apollo, and even Shem the son of Noah. Others have thought him to be a god. It is now almost certain that the books attributed to Hermes were not the work of any one hand or of any one age. The last six volumes of the forty-two composing the encyclopedia, with which Hermes is credited, refer to medicine and embrace a body of doctrines fairly complete and well arranged. Of these six, the first treats of anatomy; the second, of diseases; the third, of instruments; the fourth, of remedies; the fifth, of diseases of the eye; and the sixth, of diseases of women. In completeness and arrangement it rivals if not surpasses the Hippocratic collection, which it antedated by perhaps a thousand years. The Egyptians appear at first to have exposed their sick in public (at least, so says Strabo), so that if any of those who passed by had been similarly attacked they might give their advice for the benefit of the sufferers. In fact, according to Herodotus, the same custom prevailed among the Babylonians and Lusitanians. At a later date all who were thus cured were required to go to the temples and there inscribe their symptoms and what had helped them. The temples of Canopus and Vulcan at Memphis became the principal dépôts for these records, which were kept as

*Delivered in the Medical Department of the University of Buffalo, session of 1894-5.

carefully as were the archives of the nation, and were open for public reference. These records, being under control of the priests, were mainly studied by them, who later collected a great mass of facts of more or less importance, and endeavored to found upon the knowledge thus collected an exclusive practice of the art of medicine. In this way they formed their medical code, which was called by Diodorus the Hiera Sacra, *Sacred Book*, from whose directions they were never allowed to swerve. It was perhaps this code which was later attributed to Hermes, and that made up the collection spoken of by Clement of Alexandria. If in following these rules they could not save their patients they were held blameless, but were punished with death if any departure from them were not followed by success.

I have spoken of embalming as practiced by the Egyptians. It was of three grades: the first reserved for men of position and means, which cost one talent, and according to which the brain was removed by an opening through the nasal fossæ, and the intestines through an opening on the left side of the abdomen, after which both cavities were stuffed with spices and aromatics; then the body was washed and spread over with gum and wrapped in bandages of linen. The second grade was adopted by families of moderate means; and the third was resorted to by the poor, consisting simply in washing of the body and maceration in lye for seventy days.

Pliny assures us that the kings of Egypt permitted the opening of corpses for the purpose of discovering the causes of disease, but this was only permitted by the Ptolemies, under whose reign anatomy was carried to a very high degree of cultivation.

The medicine of the Hebrews is known generally through the sacred scriptures, especially through the writings attributed to Moses—which embraced rules of the highest sagacity, especially in public hygiene. The book of Leviticus is in large measure made up of rules concerning matters of public health. In the 11th chapter, for instance, meat of the rabbit and the hog is proscribed, as apparently injurious in the climate of Egypt and India; it, however, has been suggested that there was such variation of names or interpretation thereof as to make it possible that our rabbit and hog are not the animals alluded to by Moses. The 12th and 15th chapters of the same book were designed to regulate the relation of man and wife and the purification of women, their outlines being still observed in some localities by certain sects, while the hygienic measure of circumcision then insisted upon is still observed as a religious rite among the descendants of Moses. For the prevention of the spread of leprosy, the measures suggested by Moses could not now be surpassed, although ancient authors have confounded under this name divers affections, probably including syphilis, to which, however, the same hygienic rules should apply. Next to Moses in medical lore should be mentioned Solomon, to whom is attributed a very high degree of knowledge of natural history, and who, Josephus claimed, had such perfect knowledge of the properties of all the productions of nature that he availed himself of it to compound remedies extremely useful, some of which had even the virtues necessary to cast out devils.

The most conspicuous feature in the life of the Indian races is their division into castes, of which the most noble is that of the priests or Brahmins, who in ancient times alone had the privilege of practicing medicine. Their Organon of Medicine, or collection of medical knowledge, was a book which they called *Vagadasastir*. It was not systematically arranged, and in it demonology played a large rôle. They held the human body to consist of 100,000 parts, of which 17,000 were vessels, each one of which was composed of seven tubes, giving passage to ten species of gases, which by their conflicts engendered a number of diseases. They placed the origin of the pulse in a reservoir located behind the umbilicus. This was four fingers wide by two long, and divided into 72,000 canals, distributed to all parts of the body. The physician examined not only the pulse of his patient, but the dejecta, consulted the stars, the flight of birds, noted any incidental occurrence during his visits, and made up his prognosis from a multitude of varying circumstances, omitting only those which were really valuable, namely, the symptoms

indicating the state of the organs. Ancient Hindoo charlatan priests let fall from the end of a straw a drop of oil into the patient's water. If the oil was precipitated and attached itself to the bottom of the vessel, they predicted an unfavorable result; if, on the contrary, it floated, they gave a favorable prognosis. This is, so far as we know, the earliest recorded way of testing the specific gravity of the urine.

With all their absurdities, however, the Indians appear to have done some things that we scarcely do to-day: they are said to have had an ointment that caused the cicatrices of variola to disappear, and they cured the bites of venomous serpents with remedies whose composition has been lost.

The antiquity of the Chinese is simply lost in tradition and fable. From time immemorial their rulers have taken extraordinary care to prevent contact and interchange of ideas with foreigners. For 4000 years their manners, laws, religious beliefs, language and territory have scarcely changed. In this respect they stand alone among the nations of the earth. They attribute the invention of medicine to one of their emperors named Hoâm-ti, who was the third of the first dynasty, and whose supposititious date is 2687 B. C. He is considered to be the author of the work which still serves them as a medical guide. It is, however, more probably an apocryphal book. Its philosophy was of a sphygmic kind—*i. e.*, based upon the pulse, which they divided into the supreme or celestial, the middle, and the inferior or terrestrial; by the examination of which the Chinese physician was supposed not only to show the seat of disease but to judge of its duration and gravity. It is related that one of the ancient Chinese emperors directed the dead bodies of criminals to be opened, but this is questionable, since it is certain that they have the most profound ignorance of rudimentary anatomy, and glaring errors abound in their system. Being thus replete with errors, and possessing no anatomical knowledge, their surgery was of the most barbarous type. No one dared attempt a bloody operation; the reduction of hernia was unknown; a cataract was regarded as beyond their resources; and even venesection was never practiced. On the other hand they employed cups, and acupuncture, fomentation, plasters of all kinds, lotions and baths. The moxa or red-hot button was in constant use, and they had their magnetizers who appear to have been convulsionists. For a long time there existed at Pekin an Imperial School of Medicine, but now there is no such organization, nor any regulation for the privilege of practicing medicine or surgery since 1792. At least until lately the country and the cities were infested with quacks who dealt out poison and death with impunity. They practiced most murderous methods in place of the principles of midwifery. Only since the civilized missionaries have penetrated into their country has there been any improvement in this condition of affairs.

It is Greece which furnishes us with the most interesting and the most significant remains of the History of Medicine during antiquity, as she furnishes every other art with the same historical advantages. During the period preceding the Trojan war there is little but myth and tradition. Leclerc catalogued some thirty divinities, heroes or heroines, who were supposed to have invented or cultivated some of the branches of medicine. *Melampus* is perhaps the first of these who immortalized himself by extraordinary cures, especially on the daughters of Proetus, King of Argos. These young princesses, having taken vows of celibacy, became subjects of hysterical monomania, with delusions, during which they imagined themselves transformed into cows, and roamed the forests instead of the palaces. This nervous delusion spread to and involved many other women, and became a serious matter. Melampus, the shepherd, having observed the purgative effects upon goats of white hellebore, gave to the young women milk in which this plant had been steeped, thereby speedily effecting a cure. Scarcely less distinguished than Melampus was *Chiron*. He was mainly distinguished because he was the preceptor of *Æsculapius*, the most eminent of early Greeks in this field. By some Æsculapius was considered the son of Apollo by the nymph Coronis. Several cities of Greece contended for the honor of his birthplace, as they did for that of Homer. That he was famous at the time of the Argonautic expedi-

tion is seen by the fact that the twins Castor and Pollux desired him to accompany the expedition as surgeon. Be his origin what it may, Æsculapius was the leading character in medicine of all the ancients, with the possible exception of Hermes among the Egyptians; in fact, some scholars consider the two identical. Temples were erected in his honor, priests were consecrated to them, and schools of instruction were there established. It is related that Pluto, god of hell, alarmed at the diminishing number of his daily arrivals, complained to Jupiter, who destroyed the audacious healer—on which account, some wit has said, "the modern children of Æsculapius abstain from performing prodigies." But the true Æsculapians, the successors of the demigod, were imitated or copied by the crowd of charlatans and quacks, calling themselves theosophs, thaumaturgs, and so on; and not alone at that date, but for generations and centuries thereafter—Paracelsus and Mesmer being fair examples of this class. The poet Pindar, who lived seven or eight hundred years after Æsculapius, says that he cured ulcers, wounds, fever and pains of all who applied to him, by enchantment, potions, incisions, and by external applications.*

The followers of Æsculapius, and the priests in the temples dedicated to him, soon formed a separate caste, transmitting from one to another, as a family heritage, their medical knowledge. At first no one was admitted to practice the sacred science unless he joined the priesthood, although later this secrecy was relaxed. They initiated strangers—provided they fulfilled the test which they made. Some kind of medical instruction was given in each temple. The three most celebrated temples to Æsculapius were: that of Rhodes, already extinct by the time of Hippocrates; that of Cnidus, which published a small repertory; and finally that of Cos, most celebrated of all because of the illustrious men who emanated from this school. In these temples votive tablets were fastened in large numbers, after the fashion of the Egyptians, the same giving the name of the patient, his affliction, and the manner of his cure. For example, such a one as this: "Julien vomited blood, and appeared lost beyond recovery. The oracle ordered him to take the pine seeds from the altar, which they had three days mingled with honey; he did so, and was cured. Having solemnly thanked the god, he went away." There is reason to think that the priests of these temples made for their own uses much more minute and accurate accounts which should be of some real service, since the writings which have come down to us evince a habit of close observation and clear description of disease. During the Trojan war two men are frequently mentioned by Homer as possessing great surgical skill. These were Machaon and Podalirius. They were regarded as sons of Æsculapius, the former being the elder. The first account of venesection, although not authentic, refers to the bleeding practiced by the latter upon the daughter of the King of Caria, upon whose shores Podalirius was cast by tempest after the ruin of Priam's kingdom. Whether he was the first of all men to practice it, or not, it is certain that the act of venesection goes back long prior to the era of Hippocrates, who speaks of it as frequently performed.

Many of the deities upon Olympus seem at one time or another to have usurped medical functions. Apollo, the reputed father of Æsculapius, appropriated nearly everything under the name of Pæon, who assumed the privilege of exciting or subduing epidemics. Juno was supposed to preside at accouchments, and in both the Iliad and Odyssey it is indicated that Apollo was considered as the cause of all the natural deaths among men, and Diana of those among women.

The long Trojan war appears to have been an epoch-making event in the medical and surgical history of those times, as was the Civil War recently in our own country. Certain vague and indefinite practices then took more fixed form, and from that time on medicine may be said to have been furnished with a history. After the dethronement of Priam and the destruction of his capital, navigation was free and unrestricted. The Hellenists covered with their colonies both shores of the Mediterranean, and their navigators even passed the pillars of Hercules. By these means the worship of Æsculapius passed from Greece into what is now Asia, Africa,

*Third Pythian Ode.

and Italy. In his temple at Epidaurus was a statue of colossal size made of gold and ivory. The dialogues of Plato, especially the Phædo, make it apparent that the cock was the animal sacrificed to him, and hence sacred to the god of medicine. The priests attached to his worship were called *Asclepiadæ*, or descendants of Æsculapius. The temples were usually hygienically located near thermal springs or fountains and among groves. Pilgrimages were made from all quarters, and these localities became veritable health-resorts. A well regulated dietary, pure air, temperate habits, and faith stimulated to a fanatical degree, combined and sufficed for cures which even nowadays would be regarded as wonderful. The priests prescribed venesection, purgatives, emetics, friction, sea baths, and mineral waters, as they appeared to be indicated. The imagination of the patient was continually stimulated, and at the same time controlled. Before interrogating the oracles they must be purified by abstinence, prayer, and sacrifice. Sometimes they were obliged to lie in the temple for one or more nights. The gods sometimes revealed themselves in mysterious ways, at times devouring the cakes upon the altars under the guise of a serpent, or again causing dreams which were to be interpreted by the priests. There can be no doubt that sometimes, at least, the grossest frauds and the basest trickery were relied upon for the purpose of impressing the minds of those weakened by abstinence or influenced by drugs. Mercenary considerations were not lacking; moreover, cures were often not obtained until zeal had been redoubled by largely increased contributions to the treasury of the temples. In the neighborhood of many of these temples serpents abounded, non-venomous and easily tamed. These were employed by the priests in various supernatural performances by which the ignorant people were astonished and profoundly impressed. In fact, the serpent and the serpent myth played a very large rôle in the early history of medicine as well as that of religion and religious symbolism.

It will thus be seen that during the space of about 700 years medicine underwent a transformation in Greece. It was first domestic and popular, practiced by shepherds, soldiers, and others; then became sacerdotal; after the Trojan war it was confined to the vicinity of the temples and practiced in the name of some divinity; and finally it was wrapped in mystery and mystic symbolism where superstition was played upon and credulity made to pay its reward. Down to the time of Hippocrates the Asclepiadæ rendered some genuine service to scïence, especially by inculcating habits of observation, in which Hippocrates excelled above all. Later, however, down to the time of the Christian era, medicine in the temples declined and became in fact a system based upon the grossest jugglery.

It is time now that we make a systematic attempt to classify events in the history of medicine and to recognize certain distinct epochs as they have occurred. For this purpose I know of no better arrangement than that of Renouard, which, in the main, I shall follow, at least during the earlier part of these lectures: In this sense he divides the past into three ages, known respectively as the *Age of Foundation*, the *Age of Transition*, and the *Age of Renovation*. Each of these chronological divisions is subdivided into periods, of which the first contains four:

Age of Foundation.—1st. The *Primitive Period*, or that of *Instinct;* beginning with myth, and ending with the destruction of Troy 1184 years before Christ.

2d. The *Sacred or Mystic Period*, ending with the dispersion of the Pythagorean Society, 500 years before Christ.

3d. The *Philosophic Period*, terminating with the foundation of the Alexandrian library, 320 years before Christ.

4th. The *Anatomic Period*, ending with the death of Galen, about A.D. 200.

The Second Age, or that of Transition, is divided into a fifth or *Greek Period*, ending at the burning of the Alexandrian library, A.D. 640, and a sixth, *Arabic Period*, ending with the revival of letters, A.D. 1400.

The Third Age, or that of Renovation, includes the seventh or *Erudite Period*, comprising the fifteenth and sixteenth centuries, and eighth or *Reform Period*, comprising the seventeenth, eighteenth, and nineteenth centuries.

Examining this table for a moment, it will be seen that so far we have dealt with the

Primitive Period and the Sacred or Mystic Period. Before passing on to the Philosophic Period let us for a moment follow Renouard, who likens the three schools of medical belief in the earlier part of the Primary Age, or the Age of Foundation, to the three schools of cosmogony which obtained among the Greeks. The First of these was headed by Pythagoras, who regarded the universe as inhabited by acknowledged sentient principles which governed all substances in a determined way for preconceived purposes. Animals, plants, and even minerals were supposed to possess vivifying spirits, and above them all was a supreme principle. To this school corresponded the so-called *Dogmatic School* of medicine, attributed to Hippocrates, which was the precursor of modern vitalism and regarded diseases as indivisible units from beginning to termination—in other words, they consisted of a regular programme of characteristic symptoms, successive periods, and of long course, either for the better or worse; that was one of the characteristic dogmas of the Hippocratic teaching. The Second System of cosmogony was that founded by Leucippus and Democritus, who explained all natural phenomena without recourse to the intervention of intelligent principles. All things for them existed as the necessary result of the eternal laws of matter. They denied preconceived purposes and ridiculed final causes. To this system corresponded that in medicine which has been termed *Methodism* (medically and literally speaking) and which recognized as its founders Æsculapius and Themison. The believers in this doctrine attempted to apply the atomic theory of Democritus and Epicurus to the theory and practice of medicine. Atoms of various size were supposed to pass and repass without cessation through cavities or pores in the human body. So long as the atoms and pores maintained a normal relationship of size and proportion, health was maintained, but it was deranged so soon as the exactness of these relations was destroyed or interfered with. The Dogmatists considered vital reaction as a primary phenomenon, while with the Methodists it was secondary. The Third System of cosmogony, founded by Parmenides and Pyrrho, believed in the natural improvement of bodies in their endless reproduction and change, and concluded that wisdom consisted in remaining in doubt; in other words, they were the agnostics of that day. "What is the use," said they, "of fatiguing the mind in endeavoring to comprehend what is beyond its capability?" Later they were known as Sceptics and Zetetics, to indicate that they were always in search of truth without flattering themselves that they had found it. To them corresponded a third class of physicians, with Philinus and Serapis at their head, who deemed that proximate causes and primitive phenomena of disease were inaccessible to observation; that all that is affirmed on these subjects is purely hypothetical and hence unworthy of consideration in choosing treatment. For them, objective symptoms – or, as we would say, signs – constituted the natural history of disease, they thus believing that their remedies could only be suggested by experience, since nothing else could reveal itself to them. They thus took the name of *Empirics*.

Finally a fourth class of physicians arose who would not adopt any one of these systems exclusively, but chose from each what seemed to them most reasonable and satisfactory. They called themselves *Eclectics*, wishing thereby to imply that they made rational choice of what seemed best. The idea conveyed in the term "eclecticism" has been fairly criticised for this reason: eclecticism is in reality neither a system nor a theory; it is individual pretension elevated to the dignity of dogma. The true eclectic recognizes no other rule than his particular taste, reason, or fancy, and two or more eclectics have little or nothing in common. If that were true 2000 years ago, it is not much less so to-day. The eclectic carefully avoids the discussion of principles, and has neither taste nor capacity for abstract reasoning, although he may be a good practitioner; not that he has no ideas, but that his ideas form no working system. With him medical tact, *i. e.* cultivated instinct, replaces principle.

The eclectic of our day, however, is only an empiric in disguise—that is, a man whose opinions are based on comparison of observed facts, but whose theoretical ideas do not go beyond phenomena.

In older days philosophy embraced the

whole of human knowledge, and the philosopher was not permitted to be unacquainted with any of its branches. Now physics, metaphysics, natural history, etc., are arranged into separate sciences, and the sum total of knowledge is too great to be compassed by any one man.

Pythagoras was the last of the Greek sages who made use of hieroglyphic writings and transmitted his doctrine in ancient language. Born at Samos, he was first of all an athlete, but one day, hearing a lecture on immortality of the soul, he was thereby so strongly attracted to philosophy that he renounced all other occupation to devote himself to it. He studied arduously in Eygpt, in Phœnicia, in Chaldea, and even, it is said, in India, where he was initiated into the secrets of the Brahmins and Magi. Finally returning to his own country, he was received by the tyrant Polycrates, but not made to feel at home. Starting on his travels again, he assisted at one of the Olympic games, and being recognized was warmly greeted. He sailed to the south of Italy, landed at Crotona, and lodged with Milo the athlete. Commencing here his lectures, he soon gathered around him a great number of disciples, of whom he required a very severe novitiate, lasting even five or six years, during which they had to abstain almost entirely from conversation and live upon a very frugal diet. Those only who persevered were initiated later into the mysteries of the order. His disciples had for him most profound veneration, and were accustomed to decide all disputes with, "The master has said it." Pythagoras possessed immense knowledge; he invented the theorem of the square of the hypothenuse, and he first divided the year into 365 days and 6 hours. He seems to have suspected the movements of our planetary system. He traveled from place to place, and founded schools and communities wherever he went—which exercised, at least at first, only the happiest influence; but the success and influence which their learning gave them later made his disciples bold and then dishonest, and his communities were finally dispersed by angry mobs, which forced their members to conceal or expatriate themselves; and so, even during the lifetime of its founder, the Pythagorean Society was destroyed, and never reconstructed.

With Pythagoras and his disciples, numbers played a very important rôle, and the so-called language of numbers was first taught by him. He considered the unit as the essential principle of all things, and designated God by the figure 1, and matter by the figure 2, and then he expressed the universe by 12 as representing the juxtaposition of 1 and 2. As 12 results from multiplying 3 by 4, he conceived the universe as composed of three distinct worlds, each of which was developed in four concentric spheres, and these spheres corresponded to the primitive elements of fire, air, earth, and water. The application of the number 12 to express the universe Pythagoras had received from the Chaldeans and Egyptians—it being the origin of the institution of the zodiac.—Although this is digressing, it serves to show what enormous importance the people of that time attached to numbers, especially to ternary and quaternary periods in the determination of critical days in illness. Pythagoras was the founder of a philosophic system of great grandeur, beauty, and in one sense completion, embracing as it does, and uniting by common bounds, God, the universe, time, and eternity; furnishing an explanation of all natural phenomena, which, if not true, was at that time acceptable, and which appears in strong and favorable contrast as against the mythological systems of pagan priests. No wonder that it captivated the imagination and understanding of the thinking young men of that day. Had they continued in the original purity of life and thought in which he indoctrinated them, there is no knowing how long the Pythagorean school might have continued. But after it had been dissolved by the storm of persecution, its members were scattered all over Greece and even beyond. Now no longer held by any bonds, many of them revealed the secrets of their doctrine, to which circumstance we owe the little knowledge thereof we now possess.

The Pythagoreans apparently first introduced the custom of visiting patients in their own homes, and they went from city to city and house to house in performance of this duty. On this account they were called Periodic or Ambulant physicians, in opposition to the Asclepiadæ who prescribed only in the temples. Empedocles of Agrigentum,

well known in the history of philosophy, was perhaps the most famous of these physicians. Let the following incident witness his sagacity: Pestilential fevers periodically ravaged his native city. He observed that their appearance coincided with the return of the sirocco, which blows in Sicily on its western side. He therefore advised to close by a wall, as by a dam, the narrow gorge from which this wind blew upon Agrigentum. His advice was followed and his city was made free from the pestilence.

Again, the inhabitants of Selinus were ravaged by epidemic disease. A sluggish stream filled the city with stagnant water from which mephitic vapors arose. Empedocles caused two small rivulets to be conducted into it, which made its current more rapid; the noxious vapors dispersed and the scourge subsided.

The Gymnasia.—Before we proceed to a somewhat more detailed but brief account of Hippocrates, it is necessary to say a word or two of the ancient gymnasia of Greece which were used long before the Asclepiadæ had practiced or begun to teach. In these gymnasia were three orders of physicians—first the director, called the *Gymnasiarch;* second, the subdirector, or *Gymnast*, who directed the pharmaceutical treatment of the sick; and lastly the *Iatroliptes*, who put up prescriptions, anointed, bled, gave massage, dressed wounds and ulcers, reduced dislocations, treated abscesses, etc. Of the gymnasiarchs wonderful stories are told evincing their sagacity, which, though somewhat fabulous, indicate the possession of a very high degree of skill of a certain kind. Of one of the most celebrated of these, Herodicus, we may recall Plato's accusation, who reprimanded him severely for succeeding too well in prolonging the lives of the aged. Whatever else may be said, we must acknowledge that above all others the Greeks recognized the value of physical culture in the prevention of infirmity, and of all physical methods in the treatment of disease. By their wise enactments with reference to these matters they set an example which modern legislators have rarely if ever been wise enough to follow—an example of compulsory physical training for the young,—and thereby built up a nation of athletes and a people of rugged constitution among whom disease was almost unknown.

I come now to the so-called *Philosophic Period*, or the third period in the Age of Foundation, which is inseparably connected with the name of *Hippocrates*. This central figure in the history of ancient medicine was born on the Island of Cos, of a family in which the practice of medicine was hereditary, who traced their ancestors on the male side to Æsculapius and on the female side to Hercules. The individual to whom every one refers under this name was the second of seven; the date of his birth goes back to 460 B.C., but of his life and his age at death we do not know; some say he lived to be over 100 years of age. It is certain that he traveled widely, since his writings evince the knowledge thus gained. He was a contemporary of Socrates, although somewhat younger, and lived in the age of Pericles, the golden age for science and art in Greece.

The Island of Cos is now called Stan-Co, and is situated not far from the coast of Ionia. Formerly it was considered as having a most salubrious climate; now that it is under the dominion of the Turks it is considered most unhealthy. It possessed a temple dedicated to Æsculapius, and a celebrated medical school. But Hippocrates, not satisfied with what he could learn here, visited the principal foreign cities, and seems to have been a most accurate and painstaking observer and collector of notes. That he achieved great renown in his life is known, since Plato and even Aristotle refer to him as their authority in very many matters. His children and grandchildren followed in his footsteps, and published their writings under the same name; it has therefore become difficult to distinguish his works from theirs. Finally authors more unscrupulous, who bore no relationship to him, attached his name to their own writings. But the true were, as a rule, easily distinguished from the spurious, and were carefully separated by those in charge of the Alexandrian library.

The enumeration of his writings by different authors varies very much. Renouard, who seems to have studied the subject very carefully, gives the following as appearing to him to be the authentic list of writings of Hippocrates the Second, *i. e.* the Great: The *Prognostic*, the *Aphorisms*, the first and third books of *Epidemics*, that concerning *Regimen*

in Acute Disease, that on *Airs, Waters, and Places*, that on *Articulations and Luxations*, that on *Fractures*, and the *Mochlic*, or the treatise on instruments and reduction. This list does not comprise the fourth part of the entire Hippocratic collection, but its authenticity appears to be undoubted, and it suffices, as Renouard says, to justify the enthusiasm of his contemporaries and the admiration of posterity. Later, joined with the writings of Pythagoras, Plato, Aristotle, and others, they constituted the so-called *Hippocratic collection*, which was a definite part of the great libraries of Alexandria and Pergamos, and formed the most ancient authentic monument of medical science.

Respect for the bodies of the dead was a religious observance in all Greece, and prevented the dissection of the human body. Consequently the knowledge of anatomy possessed by Hippocrates must have been meagre. Nevertheless he described lesions like wounds of the head, of the heart, the glands, the nature of bones, etc. It being impossible to establish a physiology without an anatomical basis, it is not strange that we find but little physiology in the Hippocratic writings, and that this little is very crude and incorrect. Arteries and veins were confounded, and nerves, tendons, ligaments and membranes were represented as analogous or interchangeable tissues. The physiologists of those days abandoned themselves to transcendental speculation concerning the nature and principles of life, which some placed in moisture, others in fire, etc. Speculation thus run wild prevented such accurate observation as might have greatly enhanced the progress of physiological knowledge.

Hippocrates wrote at least three treatises concerning hygiene: the first on Airs, Waters, and Places; the second on Regimen; the third on Salubrious Diet—practically an abridgement of the preceding, in which he recommends the habit of taking one or two vomits systematically every month. The classification of diseases into internal or medical, and external or surgical, is not modern, but is due to Hippocrates; neither is it philosophic, although it is very convenient.

With so little knowledge of physiology and pathology as the ancients had, it is not strange that they ascribed undue importance to external appearance – in other words, to what has been termed *semeiotics*, which occupies a very considerable place in the medical treatises of the Asclepiadæ. Indeed, the writings on this subject constitute more than one-eighth part of the entire Hippocratic collection. To prognosis, also, Hippocrates ascribed very great importance, saying that "The best physician is the one who is able to establish a prognosis, penetrating and exposing first of all, at the bed-side, the present, the past, and the future of his patients, and adding what they omit in their statements. He gains their confidence, and being convinced of his superiority of knowledge they do not hesitate to commit themselves entirely into his hands. He can treat, also, so much better their present condition in proportion as he shall be able from it to foresee the future," etc.

To the careful scrutiny of facial appearances, the position, and other body marks about the patient, he attributed very great importance; in fact, so positive was he about these matters that he embodied the principal rules of semeiotics into aphorisms, to which, however, there came later so many exceptions that they lost much of their value. From certain passages in his book on *Prediction*, and from the book on Treatment which is a part of the Hippocratic collection, it appears that it was the custom then of physicians to announce the probable issue of the disease upon the first or second visit—a custom which still prevails in China and in Turkey. It gave the medical man the dignity of an oracle when right, but left him in a very awkward position when wrong.

To Hippocrates we are indebted for the classification of sporadic, epidemic, and endemic forms, as well as for the division of disease into acute and chronic. Hippocrates wrote extensively on internal disease, including some particular forms of it such as epilepsy, which was called the sacred disease; also fragments on diseases of girls, relating particularly to hysteria; also a book on the nature of woman, an extensive treatise on diseases of women, and a monograph on sterility. That Hippocrates was a remarkably close observer of disease as it appeared to him, his books amply prove; in fact, they almost make one think that close observation is one of the lost arts; being open only to the

objection that too much weight was attached to insignificant external appearances, speculation on which detracted from consideration of the serious feature of the case. His therapeutics, considering the crude information of the time, was a vast improvement on that which had preceded, and really entitled him to his title of Great Physician.

Of external diseases and their surgical therapeutics he wrote fully: on The Laboratory of the Surgeon, dealing with dressings, bandaging, and operating; on Fractures; and on Articulations and Dislocations; showing much more anatomical knowledge than was possessed by his contemporaries. The Mochlic was an abridgement of former treatises; in Wounds of the Head, he formulated the dictum concerning the possible danger of trifling wounds and the possible recovery from those most serious, so often ascribed to Sir Astley Cooper. Other monographs, also, he wrote, on Diseases of the Eye, on Fistula, and on Hæmorrhoids. He described only a small number of operations, however, and all the Hippocratic writings on surgery would make but a very incomplete treatise as compared with those that belong to the next historical epoch; all of which we have to ascribe—in the main — to prejudice against dissection, and ignorance of anatomy.

From the earliest times physicians and writers occupied themselves largely with obstetrics, as was most natural. The Hippocratic collection includes monographs on Generation; the Nature of the Infant; the Seventh Month of Pregnancy; the Eighth Month of Pregnancy; on Accouchment; on Superfœtation; on Dentition; on Diseases of Women; on the Extraction of the Dead Fœtus. The treatise on superfœtation concerned itself mainly with obstetrics.

On epidemics Hippocrates writes extensively, showing that he had studied them carefully. He was among the first to connect meteorological phenomena with those of disease during given seasons of the year, expressing the hope that by the study of storms it would be possible to foresee the advent of the latter and prepare for them. Seven books of the Hippocratic collection bear the title of Epidemics, although only two of them are exclusively devoted to this subject. In these books were contained a long list of clinical observations relating to various diseases. They constituted really a clinical study of disease.

The collection of Hippocrates' *Aphorisms* fills seven of the books; no medical work of antiquity can compare with these. Physicians and philosophers of many centuries have professed for them the same veneration as the Pythagoreans manifested for their golden verses. They were considered the crowning glory of the collection. Even within a short time past the Faculty of Paris required aspirants for the medical degree to insert a certain number of these in their theses, and only the political revolution of France served to cause a discontinuance of this custom. These aphorisms formed, says Littré, "a succession of propositions in juxtaposition, but not united." It has always been and always will be disadvantageous for a work to be written in that style, since such aphorisms lose all their general significance; and that which seems isolated in itself becomes more so when introduced into modern science with which it has but little practical relationship. But not so if the mind conceives of the ideas which prevailed when these aphorisms were written; in this light, when they seem most disjoined they are most related to a common doctrine by which they are united, and in this view they no longer appear as detached sentences.

The school of the Asclepiadæ has been responsible for certain theories which have been more or less prominent during the earlier historical days. One of these which prevailed throughout the Hippocratic works is that of *Coction* and *Crisis*. By the former term is meant thickening or elaboration of humors in the body, which was supposed to be necessary for their elimination in some tangible form. Disease was regarded as an association of phenomena resulting from efforts made by the conservative principles of life to effect a coction, *i.e.* a combination, of the morbific matter in the economy, it being held that the latter could not be properly expelled until thus united and prepared so as to form excrementitious material This elaboration was supposed to be brought about by the vital principles which some called nature (*Physis*), some spirit (*Psyche*), some breath (*Pneuma*), and some heat (*Thermon*). The gradual climax of morbid phenomena has, since the days

of Hippocrates, been commonly known as *Crisis;* it was regarded as the announcement of the completion of the union by coction. The day on which it was accomplished was termed *critical*, as were also the signs which preceded or accompanied it, and for the crisis the physician anxiously watched. Coction having been effected and crisis occurring, it only remained to evacuate the morbific material—which nature sometimes spontaneously accomplished by the critical sweat, urination, or stools, or sometimes the physician had to come to her relief by the administration of diuretics, purgatives, etc. The term "critical period" was given to the number of days necessary for coction, which in its perfection was supposed to be four, the so-called quaternary, while the septenary was also held in high consideration. Combination of figures after the Pythagorean fashion produced many complicated periods, however, and so periods of 34, 40 and 60 days were common. This doctrine of crisis in disease left an impress upon the medical mind not yet fully eliminated. Celsus was the most illustrious of its adherents, but it can be recognized plainly in the teachings of Galen, Sydenham, Stahl, Van Swieten, and many others. In explanation it must be said that there have always existed diseases of nearly constant periods, these being nearly all of the infectious form, and that the whole "critical" doctrine is founded upon the recognition of this natural phenomenon.

The Hippocratic books are full, also, of the four elements, earth, water, air, and fire; four elementary qualities, namely, heat, cold, dryness, and moisture; and the four cardinal humors, blood, bile, atrabile, and phlegm.

Owing to the poverty of knowledge of physics and chemistry possessed by the ancients, and notwithstanding their errors and imperfections, the doctrine of Dogmatism, founded upon the theory of coction and humors, was the most intelligible and complete among the medical doctrines of antiquity, responding better, as it did, to the demands of the science of that day. That Hippocrates was a profound observer is shown in this, that he reminds both philosophers and physicians that the nature of man cannot be well known without the aid of medical observation, and that nothing should be affirmed concerning that nature until by our senses we have become certain of it. In this maxim he took position opposed to the Pythagorean doctrine, and included therein the germ of a new philosophy of which Plato misconceived and of which Aristotle had a very faint glimpse.

Another prominent theory throughout the Hippocratic books is that of Fluxions, meaning thereby about what we would call congestions, or conditions which we would say were ordinarily caused by cold, though certain fluxions were supposed to be caused by heat because the tissues thereby became rarefied, their pores enlarged, and their humor attenuated so that it flowed easily when compressed. The whole theory of fluxion was founded on the densest ignorance of tissues and the laws of physics; the body of man being sometimes likened to a sponge and sometimes to a sieve. The treatment recommended was almost as crazy as the theory. Certain other theories have complicated or disfigured the Hippocratic writings, and certain have been founded on the consideration of two elements, *i. e.* fire and earth, or on the consideration of one single element which was supposed to be air, the breath, or *pneuma;* and there was—lastly—the theory of any *excedent*, which is very vague; of all of these we may say that they are not of sufficient interest to demand expenditure of our time.

The *eclat* which the second, *i.e.* the Great, Hippocrates gave to the school of Asclepiadæ in the Island of Cos long survived, and many members of his family followed in his footsteps. Among his most prominent successors were *Polybius*, *Diocles*, and *Praxagoras*, also of Cos, the last of the Asclepiadæ mentioned in history. Praxagoras was distinguished principally for his anatomical knowledge; like Aristotle he supposed that the veins originated from the heart, but did not confound those vessels with the arteries as his predecessors had done, but supposed that they contained only air, or the vital spirit. It has been claimed that he dissected the human body. He laid the foundation of sphygmology, or study of the pulse, since Hippocratic writers rarely alluded to arterial pulsations and described them as of only secondary importance.

The predominating theory in the Island of Cos was that which made health dependent

on the exact proportion and play of the elements of the body and on perfect combination of the four cardinal humors. This was the prevailing doctrine, *i.e.* the Ancient Medical Dogmatism, so named because it embraced the most profound dogmas in medicine and was taught exclusively until the foundation of the school at Alexandria.

Two men, however, more commonly ranked among philosophers than among physicians of antiquity, dissected the statements of Hippocrates, and embodied them more or less in their own teachings, and thus exercised a great influence on the progress of the human mind, particularly in the direction of medical study. The first of these was PLATO, profound moralist, eloquent writer, and most versatile thinker of his day or any other. He undertook the study of disease not by observation (the empirical or experimental method), but by pure intuition. He seemed to have never discovered that his meditations were taken in the wrong direction, and that the method did not conduce to the discovery of abstract truths. He gave beauty an abstract existence, and affirmed that all things beautiful are beautiful because of the presence of beauty. This reminds one of that famous response in the school of the Middle Ages to a question, "Why does opium produce sleep?" the answer being, "Because it possesses the sleepy principle." Plato introduced into natural science a doctrine of final causes. He borrowed from Pythagoras the dogma of homogeneity of matter, and claimed that it had a triangular form.

ARISTOTLE, equally great thinker with Plato, but whose mental activity was manifest in other channels, was born in Stagyrus, in Macedonia. He was fascinated by the teachings of Plato, and attained such eminence as a student that King Philip of Macedon made him preceptor to his son Alexander, subsequently the Great; by whom he was later furnished with sufficient funds to form the first known museum in natural history, a collection of rare objects of every sort, transmitted, many of them, by the royal hands of his former student from the remote depths of Asia. Aristotle, by long odds the greatest naturalist of antiquity, laid the first philosophic basis for empiricism. He admitted four elements, fire, air, earth, and water, and believed them susceptible of mutual transmutation. He studied the nature of the soul, and that of the animal body; regarded heat and moisture as two conditions indispensable to life; described the brain with some accuracy, but without the least idea of its true function; said that the nerves proceeded from the heart; termed the aorta a nervous vein, and made various other mistakes which to us seem inexcusable. Nevertheless he was rich with many merits, and no one of his age studied or searched more things than he, nor introduced so many new facts. Although he never dissected human bodies, he nevertheless corrected errors in anatomy held to by the Hippocratic school. He dissected a large number of animals of every species, and noted the varieties of size and shape of hearts of various animals and birds. In other words, he created a comparative anatomy and physiology, and the plan that he traced was so complete that 2000 years later the great French naturalist Cuvier followed it quite closely. If he be charged with having propagated a taste for scholastic subtleties, he also furnished an example of patient and attentive observation of nature. His history of animals is a storehouse of knowledge, and his disciples cultivated with zeal anatomy, physiology, and natural history. His successor, Theophrastus, was the most eminent botanist of antiquity.

It will thus be seen that Plato and Aristotle were the eminent propagators of two antagonistic opinions. One supposed knowledge to be derived by mental intuition, and the other that all ideas are due to sensation. Both count amongst moderns some partisans of the greatest acumen: Descartes, Leibnitz and Kant being followers of Plato, and Bacon, Locke, Hume, and Condillac, of Aristotle.

The excuse for stating these things, which apparently do not so closely concern the history of medicine, must be that of the learned interpreter of the doctrine of Cuvier, that "The first question in science is always a question of method."

Hippocrates formed a transition between a period of mythology and that of history. His doctrine was received by contemporaries and by posterity with veneration akin to worship. No other man ever obtained homage so elevated, constant, and universal. A little

later ignorance reigned in the school that he made celebrated. Methods and theories were propagated there under the shadow of his name which he would have disowned.

Medical science now changes its habitation as well as its aspect, and from the record of Hippocrates and his work we turn to the fourth period of the Age of Foundation, namely the *Anatomic*, which extends from the foundation of the Alexandrian library, 320 B. C., up to the death of Galen about the year A. D. 200.

(*To be continued.*)

INDIAN REMITTENT FEVER.

BY N. C. MITRA, M.A., M.B.

Remittent fever, not malarial in origin, is a malady more or less peculiar to India. It does not find place in current text-books, hence may be presumed not to exist in Europe or America; and for this reason I venture to enter upon a somewhat elaborate description, particularly as it does not come under the category of continued fevers, which are characterized by definite eruptions and local lesions.

So far as ætiology is concerned, scarcely anything has as yet come to light. Many are of opinion that it is of specific origin, and this opinion gains ground from the fact the malady is marked by a definite periodicity, and quinine fails to produce the least impression upon its course.

This form of fever presents itself in four varieties, viz.: Simple: Adynamic or low: Irritative abdominal or typho-remittent: and Malignant with *symptoms of simple remittent.* There is no premonitory rigor or chilliness; the patient feels uneasy one afternoon and is restless at night; at the same time the skin is hot and dry to touch, there is always some headache and thirst, the pulse is full and bounding—120 to 130 per minute,—tongue dry and furred, bowels generally constipated from the beginning, urine high-colored, morning temperature generally 102° to 103° F., evening temperature gradually rising to a maximum of 104°-105°, or even 106°—evening exacerbation is never ushered in with a rigor. The higher the temperature, the more restless the patient becomes, especially at night, and there may be delirium.

As the fever progresses, there is gradual prostration and loss of strength; bronchitis of a mild form supervenes, while more rarely toward the close of the disease pneumonia develops as the sequel of hypostatic congestion. There may be occasional looseness of the bowels from irritation in the intestinal canal. Some, especially children, feel tenderness on deep pressure in the right hypochondriac region, no doubt due to temporary congestion of the liver induced by the high temperature and which is more apparent in the later stages. The temperature maintains its maximum and minimum heights up to the third week, when it goes down by crisis or lysis. Sometimes, as the days wear away, the patient becomes much weaker and loses flesh considerably; the tongue becomes dry, lips covered with sordes; pulse small and soft; there is picking of bed-clothes; and muttering delirium may be present—symptoms of the failure of the nervous and circulatory systems.

In the adynamic or low form, the evening temperature is between 102° and 103°, while that of the morning rarely exceeds 101°. From the beginning there are low nervous symptoms, and within forty-eight hours the patient is delirious at night—the delirium, at first of a noisy character, very shortly merging into a muttering one; when questions are put he answers, but if left to himself mutters something which has no connection with the subject in question; and sometimes, in the midst of rational conversation, incoherent words are interpolated. As the disease progresses, he sinks into such a state of apathy that nothing can be elicited even when he is loudly spoken to; he seems to be in his full senses, but dead to the outer world.—I have seen patients staring me full in the face, but keeping dead silence when questioned. Ofttimes the eyes are closed, at others half-closed in a state of *coma vigil.* The pulse small, quick, and compressible. The extremities in many are cold while the internal temperature may be at 102°, and this is often a cause for anxiety as being premonitory of collapse; but such is not always the case, since it may arise from a defective circulation, consequent upon capillary stasis leading to imperfect oxydation and generation of heat. The pupils are always dilated; tongue dry and coated;

bowels constipated. Gradually loss of consciousness develops, and ends in coma. All the symptoms point to the failure of the circulatory system to keep up steady flow of the blood in the arterioles, whence is set up a state of passive congestion of the blood-vessels of the brain that, if not relieved, paralyzes the nervous system, with resultant coma that closes the scene.

Irritative abdominal or typho-remittent resembles the simple remittent in all respects excepting that early in the attack are observed evidences of irritation in the intestinal tract, developing acute inflammatory diarrhœa; so much is this true that it may be confounded with *typhoid* fever, and many practitioners accept it as truly such. It is for this reason, too, that the name of *typhoid-remittent* obtains. There is no pain or gurgling, but there is manifest tenderness over the whole abdomen, though nowhere distinctly localized. The stools, often watery, may have a peculiar smell, are yellowish or greenish in color, but induce no griping or tenesmus; they are passed in bed-clothes without knowledge of the patient. There is tympanites, the intestines becoming distended with gas to such an extent as to interfere with free respiration, which distention goes down with a profuse watery stool, only to speedily re-accumulate; thus the patient is subjected to the two extremes of diarrhœa and distended abdomen. This constant drain of fluids from the system tells upon the vital powers, and, if the high temperature and diarrhœa are not kept within proper control, may hasten fatal termination.

Malignant remittent is now but rarely seen. Here the fever is always of a low type, and the patient loses strength and flesh in a very short time. In a few days there are signs of collapse; the pulse small and fluttering; the tongue dry, fissured or cracked, and black; the stools bloody and loose; vomited matters sanguineous in character; petechiæ are seen all over the body; and there may be jaundice as well. These cases, almost without exception, are fatal. There is another form of this class which, though not characterized by such ominous signs, is nevertheless not a whit less unfortunate in termination, patients succumbing in from thirty-six to seventy-two hours.

During the autumn of 1894 I encountered a few of these cases; and it may be mentioned that in this locality epidemic cholera prevails every fourth year, in the months of June, July, and August. An epidemic was anticipated this year, but did not appear; our joy, however, was not unalloyed, since in its place appeared a wave of gastro-intestinal disorders including sporadic and isolated cases of remittent fever of malignant tendency; these latter were so early fatal as to lead many to believe them new and hitherto unknown developments of the cholera poison, hence they were often grouped under the designation of *cholera* fever, a name quite new to science. But whatever appellation be applied, there is not the least doubt of malignancy. Within twelve hours of the attack the patient became delirious; a few hours later he was semi-conscious, and before twenty-four hours had elapsed he sank into a state of profound coma from which he could not be aroused, and that gradually terminated in death. Thus Indian remittent fever comes on insidiously, so that patients are off their guard and no attention paid thereto until serious symptoms supervene. From the commencement of delirium to the fatal issue, the malady runs its course from bad to worse heedless of any measures looking to restraint, and it is quite patent that it is of a type distinct from ordinary remittent. Sometimes delirium may continue for forty-eight hours; meantime the pulse is small and thready, the tongue dry, the pupil dilated, eyes half-closed, and the sufferer wholly apathetic. The delirium then gives way to a state of semi-consciousness, when there is cold clammy perspiration, and deglutition becomes difficult; gradually the pulse becomes imperceptible at the wrist, the extremities icy cold, the breathing sterterous, and death closes the scene.

Among complications and sequelæ peculiar to all forms of Indian remittent, are affections of the respiratory organs, such as bronchitis, pneumonia, or pleurisy. Diarrhœa and dysentery, congestion of the liver, enteritis, inflammation of the auditory passage ending in chronic otorrhœa, parotitis, abscesses, or a general state of ill-health, are among the rest.

The marked peculiarity of the malady lies in its *duration* and *termination*. Few cases

ever recover under twenty-one days, and so nearly universal is this fact that in Calcutta Indian remittent fever obtains the popular designation of "three-weeks fever;" and yet it may end in one or two weeks, or may even be prolonged to fifty or sixty days. In nearly all cases also the temperature persistently remains elevated until the eighteenth or nineteenth day, and I have observed as high as 105° at the end of the fifth week. It may terminate through *crisis*—with profuse perspiration or diarrhœa—but the ending, as before remarked, is more commonly by *lysis*, the morning remission continuing longer, and the evening exacerbation being late and for a shorter period. Recovery is the rule in the milder forms, but when the patient is of a debilitated constitution or broken down, even here fatality is not uncommon.

Mistakes are often made in diagnosis. Early diarrhœa may lead to confounding with typhoid fever, but the pain and gurgling in the right iliac region, the characteristic color and consistence of the stools, and the eruptions, if present, afford landmarks unmistakable. Indian remittent may be distinguished from *malarial* remittent by the fact the latter is always preceded by a feeling of coldness or shivering; that the case comes from a malarial district, and is amenable to the influence of quinine. It is quite possible that some of the typho-remittent cases are masked types of true *typhoid*, but in the absence of characteristic symptoms they cannot well be classed as such; often only the post-mortem table reveals the true character.

The chief indications of danger are: Excessive diarrhœa; low muttering delirium; pneumonia or extensive bronchitis. The prognosis is bad in cases already broken down in health, in old people and infants, and in the malignant forms; and when the latter convalesce, relapses are very frequent.

Treatment requires to be varied somewhat in accordance with the exigencies of the individual case. The patient should be kept in an airy room, the bed so arranged as to avoid possible draught and the vicinity of underground drains or sewers; bright light should be excluded from the eyes of the sufferer, and he must also be preserved from the visits and mistaken kindnesses of friends—the great pests of the sick-room in India. When diarrhœa manifests itself, the bed-pan should be employed and the dejections at once removed and disinfected; the urinal also should be brought into use in like manner.

No special treatment can be advocated, since it must necessarily be symptomatic. The most important point is to look to the temperature; as the nervous system seriously suffers from prolonged exposure, always look to the lowering of the temperature as soon as it rises above 103°. Warm baths and sponging are often held highly objectionable by natives, and indeed are impracticable in many cases. The antipyretic most in favor and least pernicious, in my experience, is Lactophenin. Eight grains will induce perspiration as often as the temperature rises above 103°, and its effect persists for at least six hours; the delirium which accompanies high temperature passes away, the patient secures calm and refreshing sleep, and in two hours is bathed in profuse moisture. If the bowels are constipated, a saline draught may be ordered, but should not be frequently repeated as salines tend to weaken. An ordinary diaphoretic mixture of spirit mindererus, or sweet spirit of nitre, with tincture of aconite, is best to begin with, and should be continued as long as there is any indication therefor.

If the patient complains of sleeplessness at night, bromide may be prescribed with chloral. If headache is very severe, and bromide with lactophenin does not diminish it, a cantharidal plaster on each temple usually acts charmingly. If there is diarrhœa from the beginning, the stools should be carefully examined for any indication of irritation in the bowels; moderate diarrhœa need not be interfered with. Bronchitis is to be treated on general principles by fomentation and expectorants. Towards the later stage of the disease stimulants should be prescribed as soon as any symptoms of cardiac failure supervene, as indicated by softness and frequency of pulse. If there is threatened inflammation of lungs, applications of liniment of cajeput oil and ammonia, followed by moist fomentations, or linseed-meal poultice every three hours, will usually avert. Special care should be taken in adynamic remittent in which there are evidences of failure of nervous and circulatory systems. Here a fly blister to the nape of the neck or back of the ears is of benefit;

at the same time the bowels should be thoroughly cleared by means of calomel, followed, if necessary, by an enema of soap and water. Then begin treatment with spirits, musk, and diffusible stimulants, administered every hour or half-hour as circumstances may dictate. As the extremities are invariably cold, apply ginger-powder frictions over the fingers and toes. In worst cases as much as four or five ounces of spirit may be given with impunity and decided advantage, during the first twenty-four hours; or it may be mixed with meat extract.

In the case of *typho-remittent* the only treatment in addition to the foregoing, that is worthy of special mention, is the application of glycerin and belladonna extract over the abdomen, in turn covering with linseed-meal poultice every three hours. As astringents are all apt to irritate the bowels, they are best avoided; but bismuth in ten-grain doses is excellent when there is irritative diarrhœa.

In malignant forms, a sinapism over the præcordial region and constant recourse to stimulants are to be recommended as early as possible, to which digitalis should be added. The treatment advocated by many, of administering quinine as soon as the temperature has been brought down to normal, is quite futile in Indian remittent fever, which has a fixed duration of its own; as well might one try to cut short an attack of typhoid in the same manner.

During convalescence the patient should be put upon tonics, such as quinine and iron. As relapses are very common, great care should be taken as to the diet, which ought to be nutritious and easily assimilated, meantime keeping the bowels open by mild aperients when necessary. That all forms of exposure should be avoided, goes without saying.

Municipal Hospital,
Ranchi, Bengal.

CAUSES OF INSANITY ABROAD.

In England, Scandinavia, Germany, and France, twenty-four per cent. arise from heredity, the same number from the abuse of alcohol, twelve per cent. from business and money troubles, eleven per cent. from bereavement, ten per cent. from illness, and nineteen per cent. from various causes.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., JANUARY 10th, 1895.

Editorial.

SERUM THERAPY AGAIN.

A reaction against the unmeasured claim advanced for the curative effects of antitoxin appears to be setting in, and the most significant utterance in this respect was recently made at a meeting of the Berlin Medical Society when Doctor Hansemann, an assistant in Professor Virchow's pathological institute, as mouth-piece of Virchow himself, sharply criticised in detail serum therapeutics.

Doctor Hansemann denies that the serum immunizes; declares that no sufficient proof has been produced respecting its curative properties; and adds that the statistics obtainable of results accruing to the treatment are "both unreliable and misleading."

Giving judicial attention to statistics that have been published, they certainly appear to corroborate the charges of Doctor Hansemann. For instance, the reports of Behring, Kossel, Ehrlich, Wassermann, Katz, Weilger, Aronson, and Roux, as summarized by *La Médecine Moderne*, admit a mortality of 24 per cent.—Roux's admissions in the *British Medical Journal* place the mortality at 0.3 per cent. higher. In the Hôpital des Enfants the mortality is said to have fallen from 73 to 49 per cent.; and at the same time it is claimed that the fatality in the Trousseau Hospital, where the serum was not used, rose to 86 per cent.

Katz states the diphtheria mortality in two of the chief hospitals in Berlin from 1892 to 1894 to have averaged 40.36 per cent., but during two months of the latter

year, when one hundred and twenty eight cases diagnosed by the presence of Klebs-Loeffler bacilli, were treated by means of the antitoxin, the mortality was 26.5 per cent.; it is also admitted that of forty two *severe* cases nearly 24 per cent. died, while *all* truly septic cases likewise succumbed. There are no other statistics than these cited available, although there are numerous reports of isolated cases of one, two, three and four in number.

Per contra, it must be remembered that the statistics of Leseure, of the Oram Hospital, show he had no deaths from diphtheria while employing a forty-per-cent. solution of chromic acid; that in like manner Goubeau lost no cases under a treatment with corrosive sublimate and glycerin; Flatraut was equally successful with petroleum; and a late Parisian medical journal publishes a table of 427 cases with a mortality of only eight per cent. and no antitoxin employed. Again, Roux admits all his cases were treated locally by Labarraque's solution, hence may be propounded the pertinent query: Why, if antitoxin is a specific, is it necessary to resort to the knife and to local and constitutional treatment?

It has been well said that "statistics is a mistress who prostitutes herself to the first comer," and in no way is this more evident than from the fact that reports of two or three cases, whether positive or negative in results, afford no criterion for judgment. It frequently happens that a few cases coming under the notice of one physician readily recover, while the same number in equally skillful hands in another locality succumb. We can therefore only form judgment upon the larger number of cases—those which are summarized by *La Médecine Moderne*, which amount all told to 1,081, with, as already remarked, an average mortality of twenty-four per cent.

It is well known that in every epidemic the mortality is greater at the time of inception than during the period preceding its disappearance—that in the beginning a larger proportion die, while toward culmination by far the larger percentage recover. Statistics derived from a few isolated hospitals, and extending over a few brief weeks, can afford no trustworthy means for comparison, and notably the hygienic surroundings in different institutions are most variable. Finally, the ravages of diphtheria in Detroit, St. Louis, Chicago, and New York, at one precise period, give no idea of the virulence of epidemics during the same period in Portland, New Orleans, San Francisco, and St. Paul. At best, to derive any definite satisfaction from statistics, such must needs cover a period of many months and the manifestations of a number of epidemics.

A query put to a number of physicians in Michigan, Ohio, and Ontario, as to the death-rate from diphtheria in any precise locality—not in individual practice, but embracing the experience of all the physicians of the neighborhood—reveals that no one considers that, even in the most serious of diphtheria epidemics, the average fatality ever reaches twenty per cent.; indeed, the consensus of opinion is that it varies from eight to fourteen per cent., a proportion that is upheld by our own experience and observation.

An examination of the reports of the State Board of Health of Michigan fails to reveal any such formidable percentage of fatalities as are credited with accruing to antitoxin treatment; moreover, a communication addressed to the Secretary of the State Board elicits the opinion that the extreme of the death-rate from diphtheria has never during twenty years reached twenty-four per cent.

In 1883, Mr. George S. Davis, of Detroit, published a work entitled "A Collective Investigation of Diphtheria," which embodies the observations of upwards of one hundred physicians in all parts of Canada and the United States—from Ontario to Texas and from Nova Scotia to California,—and careful examination of these in detail fails in a single instance to reveal any evidence that would favor the belief that diphtheria, under all forms and methods of treatment, ever yields a death-rate of twenty-four per cent.

Under such circumstances we believe it incumbent upon us to say that diphtheria in Europe is much more virulent than in the United States—which has not been borne out by personal observations,—or else the claims advanced for "serum therapy" require more careful sifting as to statistics,

and meantime the results deserve to be received with a due proportion of care.

It is claimed by advocates of the antitoxin treatment that the presence of the Klebs-Loeffler bacillus is conclusive, and yet the same pathologists have admitted that this bacillus, as well as the pneumococcus, streptococcus, and other so-called specific microbes, may be present when the diseases to which they are said to give rise are not even pending—in other words, under the old methods of diagnosis diphtheria *only* was diphtheria and its statistics of value, while now every person, even in health, who harbors the bacillus of Loeffler, must *per force* be suffering from the malady and go to swell the statistics of "*cures*." Considering these facts, there appears good ground for the theory advanced that a due share of the cures claimed for antitoxin are the outcome of recovery from mild diphtheria and tonsillitis, while the more severe cases still remain in the column of fatalities. Another matter is pertinent in this connection. It is only within a few hours that we saw a report in a medical journal of the "cure" of four cases of "unmistakable diphtheria," which from the description must have been nearly *in articulo mortis*, by an agent which chemical examination has proved to be utterly inert as a therapeutic agent.

It may here be said that the assertion made regarding antitoxin, that it is innocuous, is not borne out by facts; indeed, if it is possessed of any virtue, it must likewise be potent for ill, since it is a well known fact that any agent having real therapeutic value will fulfill the dual conditions.

Another drawback to the claims advanced is, that serum therapy controverts the very pathology that its supporters have for so many years been laboring to promote, viz., that diphtheria is a local disease with secondary constitutional manifestations—and consequently not a constitutional or general malady *per se;* and yet those who have held to the latter contention, and believe it is the local manifestation that is secondary, and have based their therapeutics on this belief, in our experience have had occasion to record the fewest fatalities.

Reverting now to the obverse of the situation, it must be admitted that the evidence as regards the value of serum therapy in its application to individual and isolated cases seems to be most positive. Results are reported from New York, Philadelphia, and other large cities, most circumstantial in character; and the verdict in England, as the result of a series of eight hundred cases, is emphatically favorable to antitoxin, though all the "returns" have not been duly sifted. It is even stated that the demand in Germany is far greater than the supply, and that the remedy has been tried in London hospitals to a considerable extent with no apparent diminution in favorable results. The disappointments that have ensued may be the result of carelessness, of mistaken zeal, or hasty and immature judgment. To be successful, it is understood, the treatment must be carried out with the strictest of antiseptic precautions—everything employed must be carefully sterilized, and even a hypodermic syringe reserved to this purpose alone; and further, the dose has no relation to age, but depends upon the weight of the patient and the gravity and stage of the disease.

It will be some time before the absolute value of this treatment can be known. As already remarked, carefully sifted statistics covering a period of months, and even years, are necessary. The supply of serum even in Germany and France is very limited, and it is only with great difficulty that any samples are obtained in the United States. It must be remembered also that the preparation of serum itself entails a labor of some months, and yet within the brief period of half a dozen weeks several firms in the United States are already exploiting a product which they term antitoxin, and which is averred to be the same precise article as that manufactured by Behring or Aronson. Such must necessarily be open to suspicion, and evidence in this direction is afforded by the fact that one pharmaceutical house which took measures to prepare antitoxin almost with the first announcement of its virtues does not expect to be able to even place samples for scientific study in the hands of physicians for some months to come. Therefore it behooves those who are interested in medical science and in faithful tests to look to the source of supply of the product employed. It may also be said that it is among the possibilities that the

weak side of the statistics from Europe and elsewhere is due to employment of uncertain antitoxin products, and insufficient care in sifting the series of cases. We must therefore urge upon the medical profession the benefit of making haste but slowly: of carefully substantiating every step: and of securing on all occasions an antitoxin that is above suspicion.

It is not improbable that, in spite of the accumulation of negative evidence, antitoxin will prove of some specific value, even though such may not accrue to its employment in diphtheria. Experiments with immunized serum in the past appear to admit of no conclusion but that such possesses some bactericidal properties, but its precise rôle has yet to be definitely determined in a way that can be done only after long experimentation with many diseases, and after a long series of epidemics, and it will have contributed considerable to medical science in the line of natural history and physiology, if nothing more.

It must be remembered also that there is a psychic factor which is strongest with the inception of every new remedy; that the primary evidence is always overwhelmingly positive; that it is not until enthusiasm is abated and positive and negative results are carefully segregated and compared that the true value becomes apparent. Until all this has been accomplished the medical profession can afford to wait, and at the same time it behooves them to exercise a due amount of conservatism, especially when is considered the fact that a large proportion of experiments must be at the expense of suffering humanity. In this connection it might be well to suggest the old motto of Davy Crockett: "Be sure you're right, then go ahead."

GELATIN CAPSULES.

In these days, when elegant and palatable medication is deemed a *sine qua non*, it seems passing strange that the gelatin capsule, which offers so much, is so generally ignored. When first invented, the convenience of the device for the administration of nauseous remedies was speedily recognized, but, unfortunately, the price was for a long time practically prohibitive, especially to rural practitioners, who for the most part dispense their own remedies.

Now, however, the price of empty capsules has become so greatly reduced that they are within the reach of all, and should seemingly form as much a part of the *armamentarium therapeuticum* of the physician as his pocket case or hypodermic syringe; moreover, they are made of such convenient sizes as to be available for almost any purpose in the way of medication. They form an almost absolute means of securing relatively exact doses; the smaller are readily taken by the youngest children, and their advantages in administering quinine and nauseous drugs to the younger patients cannot be over-estimated. Physicians who dispense their own remedies—and there are few who do not carry a small pocket case—will find it greatly to their professional advantage to carry a supply of capsules for the purpose of enclosing the tablets, powders or triturates they choose to prescribe. The compressed tablet and the tablet triturate are two very popular forms of medication, yet both are open to the objection that by constant exposure and oxydation their outer surface is so changed that solution is delayed—in other words, owing to various causes they are not disintegrated in the stomach as readily as is desired. The crushing of the tablet or even a pill is a matter of but a moment, and enclosure in a capsule requires little manipulation while it adds greatly to convenience of administration, to elegance, and to consequently a degree of palatability that cannot otherwise be obtained.

It is strange that these convenient aids to prescribing and dispensing are so often ignored—the more so as a moment devoted to candid reflection will convince the most skeptical that the capsule is very easily dissolved; scarcely does it reach the stomach ere the lesser portion, which forms the cap, begins to swell and curl backwards upon itself, when, almost immediately, it releases the medicament in a form to be readily dissolved and absorbed. Finally, there are few conditions of the economy in either health or disease when the capsules are not available. The larger forms are likewise suitable to the employment of remedies in the form of suppositories. They are cleanly, easily introduced, and rapidly effective.

AN APPEAL FOR THE INDEX MEDICUS.

The following, widely circulated among the physicians of Chicago, also appeals to every practitioner in Canada and the United States:

Since 1885 the *Index Medicus* has been carried on at a loss to the publisher and without compensation to the editor, and within the last year the subscription list has so far diminished that the journal will cease to appear unless very substantial support is given by the profession.

The undersigned, committees of the Chicago Medical Society and Chicago Academy of Medicine, deplore the loss to American medicine that will accrue from the discontinuance of this valuable publication. It is the most complete bibliography of medicine that has ever been published, and the only one in the English language. The physicians of Chicago ought to feel a strong interest in maintaining this publication, as it is the only index to the vast accumulations that are added yearly to the Newberry Library.

Will not each reader lend support to the *Index* by sending a subscription to Doctor H. N. Moyer, 910-103 State street, Chicago, or to the publisher, Geo. S. Davis, Detroit, Mich.?

Very truly,

NICHOLAS SENN.
J. C. HOAG.
W. H. WILDER.
JAS. G. KIERNAN.
H. N. MOYER.

Chicago, January 1, 1895.

EDITORIAL NOTES.

An Apology.—

The article on "Direct Fixation in Fractures," which appears on page 715 (December 10th) of THE MEDICAL AGE, obtained place with the understanding it should appear in no other periodical. The journal was hardly cold from the press, however, ere the same paper appeared in the *Railway Surgeon* of December 18th. Had the editor of THE MEDICAL AGE had the most faint idea that this article was to be offered to another journal for publication, it certainly would not have been admitted to these columns.

The Perfect Man—

Should weigh twenty eight pounds for every foot of height.

Items and News.

When the Babes Had Tonsillitis.—

When the babes had tonsillitis, O Lord but what a time!
The father of all poets could not tell it half in rhyme.
It was hustle for the doctor at 12 o'clock at night,
And scurry to the drug store before the morning's light.
Then baby's pills at 7, and 'tother one's at 8,
Prescriptions next in half an hour—don't be a minute late.
And don't forget the powders, and the iron for the blood,
And peptonoids at eating-time to take the place of food.

And when the darlings waked and cried, 'twas papa walk the floor,
With twenty pounds on one arm, on the other fifty more,
And keep the house warm all the time, and don't get in a draught,
And don't mix up the medicines. Why didn't I go daft?
With baby's pills at 7, and 'tother one's at 8,
Prescriptions then in half an hour—don't be a minute late,
And don't forget the powders, and the iron for the blood,
And peptonoids at eating-time to take the place of food.

The doctor brought them through all right, and thank the Lord for that!
And both are strong and rosy now, and both are getting fat.
He showed most wondrous skill, I think, as doctors often do;
But what I marvel most at is that wife and I lived, too.
With baby's pills at 7, and 'tother one's at 8,
Prescriptions then in half an hour—don't be a minute late,
And don't forget the powders, and the iron for the blood,
And peptonoids at eating-time to take the place of food.

—*Buffalo Express.*

The Over-Zealous Therapeutician.—

Professor Stokvis, speaking of the vagaries of modern pharmacy and chemico therapeutics, says:

"The reason of the present situation—or imbroglio—is obvious. By the side of the chemist stands the busy practitioner or the overwrought professor. Both are oppressed by the sense of insufficiency of their art; neither has the time to observe, reason, and conclude. It is the professor who publishes with railroad haste his observations and impressions, for he is ever haunted by the fear lest another should precede him in the new discovery. He it is who makes others follow, sheep-like, in the wake. He constitutes himself a bustling *impressario*, always on the look-

out for a new sensation, agitating himself and the public, and, finding that he has before him a fickle, unquiet, impatient audience, he hastens to deal with new subjects, if not every day, at least every week. During the year 1893 sixty-eight new chemical products have been recommended to me, this figure not being inclusive of entirely new drugs or their active principles. In each case we are told that the new product is of the very first importance, of exceptional therapeutic value, and perfectly harmless. *Fistula dulce canit volucres dum decipit auceps.* The wise man will not be taken in. He will be guided by therapeutic teaching, such as that of the immortal Baglivi, the author of the pregnant phrase, 'Ars tota in observationne,' or by the teaching of my honored friend, Professor Semmola, delivered with all his *maestria Italianni* from his chair in the University of Naples—a university which has lately set a glorious example to Europe by proclaiming that a drug that is efficacious cannot be harmless. Nearly all new remedies have their period of success, be it but for an hour, and this is due to 'suggestions,' either by medical men or patients; but, with few exceptions, these panaceas are doomed to be laid aside as forgotten and antique curiosities."

Wants to be a Doctor of No Subaltern Grade.—

The following communication is self-explanatory, we regretting, however, that it cannot be reproduced by the photo engraving process so that our readers might enjoy the *tout ensemble.* We are informed that the Missouri Medical College has not answered the letter, so that some other institution may capture the prize student who wants "to study the latest and best."

Sherman tex
Nov 8th 94

to the Supt of Mo Medical School Dear Sir for information I write you I want to buy me a suply of books to stoudy to become a doctor & I want to come to that school I want you to write me what is required to get I have stoudied Gays Nattiomy some & phlint on practis but ant got any books now I want to buy & stoudy till the next School comences then come there a friend of mien youst to live there he is hear a drugist he says when a stouday tund loose there with a diploma he dont haft to be examoned to practis & wants me to goo to that school hope you will be so kind to write me & let me no what to buy & all so what the tueasen is a tearm or a year I want to goo fast when I come as I can probly you may want to no what kind of a scholar I am mostly in figers & draften I am a Macanic & artist all so I dont no a thing a bout lattin if We haft to learn much lattin Would supose a book of some kind that gives the names in lattin & english to at least my fried says so I youst to travil dr light hall the grate indian doctor I came to the conclusion to goo up a try as I can then nothing to stope me now I am single & 36 years old so I wil a wait your reply pay you well four your trouble yours truly

P S I want to stoudy the latest and best So you can Judge better than I can I am strckly sober & belong to 5 of the leaden orders of the World from Masons Down.

—*Meyer Brothers' Druggist.*

Righteous Judgment.—

Exemplary punishment was passed by the Chief Presidency Magistrate on George William Spalding for defaming Doctor James Munday in the columns of a so called "comic" paper—the *Bombay Gossip*—which has now followed many another ephemeral print of the same undesirable character into the limbo of decay. The defendant tried to prove a little too much, and took the inconsistent course of first attempting to justify the libel and then of expressing his extreme sorrow for its publication. Yet another plea urged was, that the defendant's journalistic venture has been an unfortunate one, and he had lost all the money he possessed in the undertaking. If this is true—and there is no reason to think otherwise—it does not in any way justify the libel, but only shows that the man who, under the guise of a humorist, dabbles with the good name of fellow-citizens, is not likely to find the game a paying one. Mr. Spalding, having deservedly lost his little all in an undertaking of this kind, was unable to pay the fine of one hundred rupees imposed upon him by Mr. Cooper, and if it is not forthcoming will have a profitable opportunity for meditation during fourteen days' solitude in the House of Correction.—*Bombay Gazette.*

[Doctor James Munday, who is vouched for as a gentleman and physician of unexceptionable character by the profession of Bombay, certainly is to be congratulated on having boldly prosecuted his cowardly assailant.—Ed.]

Sentimentalism versus Syphilis.—

It would be only just that men who give or propagate syphilis should be punished. But we fear that such a course is impracticable. Syphilis is spread in our large cities, and we cannot ignore the existence of the agents by whom it is diffused. Some measures should be adopted to control the social evil. Compulsory registration does not meet with favor from scientific men who have studied the subject; and it appears that the French system has failed, owing to the penal clauses which send the unfortunates to prison and not to a hospital. In Italy the Contagious Disease Acts are no longer enforced, so that

the arguments drawn from foreign customs no longer apply. Some control is absolutely demanded. Unlicensed prostitution in London, for instance, is worse than ever, in spite of police efforts that the streets may be kept clear. But this does not diminish the evil; you do not get rid of dirt by simply putting it out of sight.—*Provincial Medical Journal.*

Quarrel Over Antitoxin.—

There is an unpleasantness in Berlin over the diphtheria antitoxin. Behring recently published an article in a lay journal in which he claimed priority in the matter of the discovery and use of the serum, and accused Virchow of not giving him credit and of recommending the use of Aronsohn's serum. It seems the latter, as soon as Behring's discovery was made, at once went to work and manufactured a serum by the same methods, but stronger, and put it promptly on the market. Virchow publicly disclaims any claim for himself or others, however. Evidently there has a good deal of the commercial spirit crept into the manufacture of the antitoxins.—*Medical Record.*

Death of a Popular Scientist.—

M. Louis Figuier, who died in Paris recently, was born in Montpellier in 1819, where he took his degree of Doctor of Medicine in 1841. A few years later he became professor in the Ecole de Pharmacie. In 1850 he received the degree of Doctor of Science at Toulouse. He published some important memoirs on chemical subjects, but will be remembered chiefly for his numerous works on popular science. Since 1856 he issued the *Année Scientifique*, in which was summarized the most interesting and important scientific discoveries of the year.

Cause of Death.—

According to the census of 1890, of every 10,000 deaths in the United States one will be from calculus, thirty-five due to Bright's disease, forty to fevers other than typhoid, fifty-nine to rheumatism, seventy to scrofula, 130 to cancer, 140 to apoplexy, 148 to whooping cough, 160 to dysentery, 190 to meningitis, 220 to scarlatina, 240 to ague, 250 to convulsions, 310 to typhoid fever, 350 to heart trouble, 480 to diphtheria, 880 to diarrhœa, and 1,420 to phthisis.

Death vs. Birth Rate.—

St. Petersburg is probably the only city in the world where from year to year the death rate exceeds the birth rate. In the 125 years ending 1888 there were 1 539,000 births and 1,772,000 deaths.

Book Reviews.

LITTELL'S LIVING AGE. Price, 15 cents; $8.00 per year. Littell & Co., Boston.

This well known periodical has now entered upon its 204th volume. The opening issues of this year will contain, among others, valuable and timely articles on science, politics, biography, theology, and general literature, from the pens of Prince Kropotkin, the Duke of Argyll, Max Muller, the Marquis of Salisbury, Lord Hobhouse, Edmund Gosse, Lord Ebrington, Sidney Low, Patchett Martin, W. M. Conway, and other leading writers; also special papers of interest by M Rees Davies, Stephen Gwynn, etc.; in fiction, the choicest short stories by the best authors.

For a magazine which gives an amount of reading matter unapproached in quantity and unsurpassed in quality by any other periodical, the subscription price is not alone cheap, but phenomenal; while by taking advantage of the generous clubbing rates offered in many localities much better terms may be obtained. Indeed, the publishers offer to send any one of the $4.00 monthlies in connection with *The Living Age* for one year for only $10.50, thus furnishing at small cost the cream of both home and foreign literature. They also offer to send *gratis* to all new subscribers for 1895 the thirteen weekly issues for the last quarter of 1894, forming an octavo volume of 824 pages.

THE PETERSON MAGAZINE. Price, 10 cents; $1.00 per year. Penfield Publishing Co., Asbury Park, N. J., Philadelphia, and New York.

The Christmas number contains: "A Christmas Greeting," by C. H. Parkhurst; "The Brides of Niagara," by Will Carleton; "Professional Bicycling Abroad," by A A. Zimmerman; "Weak," by Frank H. Sweet; "The Seventh Daughter," by Ernest McGaffey; "Successful American Play-Makers," by Mary Penfield; "The Black Christmas in the South," by T. J. Mackey; "Venetian Vistas," by Elmer Ellsworth Garsney; "Duty," and "Holly Song," by Robertus D. Love; "A Castle in Spain," by Edward Lande; "White Nights," by Mignon Villars; "Melba"—A Queen of Song—by Emily Meredyth Alward; "Some of America's Advertisers," by Charles Austin Bates; "A Fortunate Assignment," by Robert Emmett MacAlarney; "Some Eminent Women Painters," by O. L. Hall; "Guard, the Hupa," by John Vance Cheney; "The Burro," by Henry Russell Wray; "Serge Zoubow's Christmas," by Gertrude Atherton; "Joy," by Clinton Scollard; "Municipal Re-

form in New York," by A. Willis Lightbourn. There are the usual "Publishers' Corner," "Said in Passing," and "Among the Newest Books."

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

The January number begins a series of papers by Robert Grant, the first being entitled "The Art of Living;" Noah Brooks begins a group of three papers on American Party Politics with an account of "The Beginnings of American Parties." The chief serial fiction for the year is George Meredith's novel "The Amazing Marriage." Notable among the single articles is Mrs. Maud Ballington Booth's account of "Salvation Army Work in the Slums." The number also contains two short stories of unusual power, "The Going of the White Swan," by Gilbert Parker, and "Sawney's Deer Lick," by Charles D. Lanier. Among other notable articles in this number are a narrative poem by A. Conan Doyle, entitled "A Forgotten Tale;" an essay on "Good Taste," by Augustine Birrell; "Reminiscences of Doctor Holmes as Professor of Anatomy," by his successor in the Harvard Medical School, Doctor Thomas Dwight; "A Study of the Mental Characteristics of the Japanese," by Professor George Trumbull Ladd; "A Tuscan Shrine," by Edith Wharton. "Sunset," by Josephine P. Peabody, "The Wanderers," by Harriet Prescott Spofford, and "The Point of View," complete the number.

HOME AND COUNTRY. Price, 15 cents; $1.50 per year. Joseph W. Kay, New York.

The Christmas number contains: "A Fountain Pen," by Robert Wagner; "Christ's Personal Appearance," by Edgar Mels; "Cyril's Recompense," by Bentley Hall; "Heredity," by Mildred Lancaster; "The Darts of Apollyon," by Justin Fairweather; "First and Last," by J. R Nicholls; "An English Election of the Olden Times," by Evan Stanton; "The Christmas Tree," by Marion Tollifero; "John Drake—A Christmas Story," by Clarence Herbert New; "About Blab Schools and Other Peculiar Things," by William P. Brown; "Reminiscences of Josh Billings," by Joel Benton; "Abdul-Kassim and the Iron Casket," by Sheik Abdullah Hussein; "Alexander Dumas, *Fils*," by A. Villiers; "The Madman's Story," by T. L. Krebs; "Russia in Central Asia," by Olga Skobaloff; "Shenandoah," by Helen W. Grove; "The Ghost of Periander's Wife," by Anna O. Commelin; "My Castle in the Air," by David La Costa; "Dorothy's Match-Making," by Violet E. Mitchell; "To My Lady Fair," by Frank Holland; "In Months of Darkness," by Howard Layton; "Joe Against Georgius," by Katherine Bates; "New York's Arab Colony," by Thomas Wordsell.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston, Mass.

An article in the January number which will be likely to attract the attention of thoughtful readers is Mr. John H. Denison's "Survival of the American Type." There appears also the first installment of "A Singular Life," by Elizabeth Stuart Phelps; the opening portion of "A Village Stradivarius," a two-part story, by Kate Douglas Wiggin; "Joint Owners in Spain," by Alice Brown; "A Wish Fulfilled," by Lafcadio Hearn e; "The Symphony Illustrated by Beethoven's Fifth in C Minor," by Philip H. Goepp; "The Meaning of an Eisteddfod," by Edith Brower. Mr. Havelock Ellis discusses "The Genius of France;" Professor Adolph Cohn writes of "Gallia Rediviva," J. T. Trowbridge of "The Author of Quabbin," J. M. Ludlow of "Co-operative Production in the British Isles." There are also: "Mr. Winthrop's Reminiscences;" "Soul, Wherefore Fret Thee?" by Stuart Sterne; "A German Appraiser of the United States;" "Alcyone," by Archibald Lampman; and the usual "Comments on New Books," and "Contributors' Club."

MAGAZINE OF TRAVEL. Price, 25 cents; $2.50 per year. E. H. Talbot, New York.

This is the attractive title of the newest candidate for public favor in the field of periodical literature. The subject of travel naturally appeals to all, and when, as in the case of this initial number, it is treated by able pens and in the most entertaining manner, it reaches a degree of interest that is at once irresistible and all-absorbing. So well chosen are the varied contents of the number before us that there is no suggestion of dryness or monotony. The most interesting regions of Europe and America are drawn on for materials, and when these are woven into narrative and sketch and story and poetry, by such minds as the Hon. Chauncey M. Depew, the Hon. Theodore Roosevelt, Christine Terhune Herrick, Ella Wheeler Wilcox, Charles D. Lanier, Frank Chaffee, and others equally well known in their respective fields, they should bring instant and marked success to the publication which gives so valuable a contribution to the world's choicest literature.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia

The complete novel in the January issue is "The Waifs of Fighting Rocks," by Captain Charles McIlvaine; "By Telephone" is by Francis C. Regal, "A Question of Responsibility" by Imogen Clark. The Christmas stories are: "Mrs. Santa Claus," by Marjorie Richardson; "A Prodigal Friend," by S. Elgar Benet; "Mrs. Risley's Christmas Dinner," by Ella Higginson. Other contributions are: "Christmas Customs and Superstitions," collected by Elizabeth Ferguson Seat; "The Ducks of the Chesapeake," by Calvin Dill Wilson; "Herbert Beerbohm Tree," the actor, by Gilbert Parker; "With the Autocrat," by F. M. B.; M. Kaufmann discusses "Socialist Novels;" Edgar Fawcett recalls "New Year's Days in Old New York," and Edith Duff "Empress Josephine's Happy Day," ninety years ago. The poetry is by M. S. Paden, Alice Brown, Kathleen R. Wheeler, and Susie M. Best.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

The leading article in the January number is by Garrett P. Serviss, entitled "Pleasures of the Telescope;" Mrs. H. P. Plunkett writes of "Twenty-five Years of Preventive Medicine," Doctor Lewis G. Janes of "Ethics in Natural Law," Colonel A. B. Ellis "On the Origin of Weeks and Sabbaths," Doctor Felix L. Oswald of "Two Lung-Tests," Professor James Sully of "Studies of Childhood;" "School Ethics" is by H. C. Blackwood Cowell; "The Barometric Measurement of Heights," by J. Ellard Gore; "Babies and Monkeys," by S. S. Buckman; "Animal Tinctumutants," by Doctor James Weir, Jr.; "Schoolroom Ventilation as an Investment," by G. H. Knight; "Correlation in Organic Growth," by Herr E. Strasburger; "Sketch of Denison Olmsted." There are the usual "Editor's Table," "Literary Notices," "Popular Miscellany," and "Notes."

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

The contents for January are: "Napoleon as a Statesman and Lawgiver;" "Letting in the Jungle," by Rudyard Kipling; "Concerning Ships that Pass in the Night," by its author; "Thomas Nast's Share in Overthrowing the Tweed Ring in 1872," by E. J. Edwards; "The Green Flag," by A. Conan Doyle; "The Battle of Marengo," by a Soldier of Napoleon; "A Lonely Soul," by Marjorie Milton; "The Dramatic Season," by Edward Marshall; "Mr. Moody: Some Impressions and Facts," by Henry Drummond; "Three Men and Two Bears," by Cy Warman.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co. (Limited), New York.

The January number offers an extremely attractive table of contents. The "Fashions" are described in the usual satisfactory manner, and there is a special article upon "Misses' and Girls' Party Dresses;" Miss Florence M. Hodder writes on "Cornell;" Alice McKenna treats of "Women in Telephone Exchanges;" A. B. Longstreet of "Hygiene of the Eyes and Ears." Under the caption of "Crepe and Tissue Papers" is an interesting description of Dressing Dolls. There are the usual "Cooking," "Around the Tea-Table," "Floral Work," and "New Designs."

OUTING. Price, 25 cents; $3.00 per year. Outing Publishing Co., New York.

The January or holiday number is a gem in text and illustrations. In addition to many breezy sketches of seasonable sport, travel, and adventure, it contains three complete articles of fiction: "Bas' Therese," by Jean Porter Rudd; "Down in the Desert," by W. M. Wolfe; "The Tact of Miss Aspinwall-Jones," by William Earle Baldwin; and the second part of Sara Beaumont Kennedy's fascinating story, "A Jamestown Romance."

THE INSANE IN FOREIGN COUNTRIES. By William T. Letchworth. Cloth; gilt top; 8vo; pp. 400. Price, $3.00. George P. Putnam's Sons, New York.

This magnificent and instructive volume, beautifully illustrated with twenty-one plates, is an outcome of an investigation pursued for seven months, during which special attention was given to the varied kind of provisions made for the indigent insane in many countries. The author has not contented himself with mere perfunctory work, but has visited the insane, the poor, and the unfortunate, of all classes, in the majority of insane asylums in Canada, the United States, the United Kingdom, Scandinavia, Germany, and France. He also gives the main features of lunacy laws in different countries, and reports with considerable minuteness the actual condition of six famous asylums; he deals even with the smallest of details of management, and goes into the history of the care and treatment of the wards of the State. Consequently the volume is an invaluable treatise —invaluable not only to medical men and

specialists, but to the general public.—To alienists especially it will prove an important guide. Finally, the work evinces a great deal of historical research whereby is accumulated much of curious and interesting material which cannot be obtained elsewhere except by the study of a large number of volumes.

The author has performed a rare service, and it is impossible not to appreciate his labors.

THE ROMANCE OF A TRANSPORT. By W. Clark Russell. Cloth; 12mo; pp. 404. Price, $1.00. Cassell Publishing Co., New York.

This new sea story is an autobiographical account of the tragic and thrilling experiences of a young English girl, who in man's attire becomes a stowaway on board the ship in which her innocent lover is being conveyed as a convict to Tasmania.

From first to last the volume contains not a single dull line. Mr. Russell is not only without a peer in the painting of sea scenes, but he has established himself as the legitimate successor of such authors as Marryatt, Wise, Chamier, Cupples, and Michael Scott. Every sentence is realistic, every word well chosen and excellently fitted to the topic. The great difference between Mr. Russell and the older authors mentioned is that he deals with sea life as observed in merchant service, while they devote themselves largely to the navy. After beginning the perusal of this volume, one cannot willingly lay it down before *finis* is reached.

THE PRACTICE OF MEDICINE. By William B. Stewart, A.M., M.D. Cloth; 8vo; pp. 434. Price, $2.75. E. B. Treat, New York.

The author disclaims any purpose of replacing the expensive and elaborate publications, but undertakes to give the busy practitioner and student concise and accurate descriptions which will suggest outline and practical thought on ætiology, symptomatology, pathology, diagnosis, prognosis, and treatment. Nearly all of the prominent authorities in medical literature have been laid under contribution, and the most modern methods of treatment given due place.

THE MEDICAL NEWS VISITING LIST. Seal-grained leather; pp 160. Price, $1.25. Lea Brothers & Co., Philadelphia.

The 1895 issue keeps up the reputation this publication has had in the past. The series offers both dated and undated, and in two sizes, for thirty and sixty patients weekly. Thirty-two pages of valuable information enhance the value of the work.

Therapeutic Brevities.

Muirapuama as an Aphrodisiac.—Muirapuama is a combination of two aboriginal words signifying straight or rigid tree; it describes a shrub that is well-nigh leafless, and which only attains to the height of one or two yards, found in clay districts of the southern and southwestern parts of the State of Para, as well as upon the slopes of Colombia and Rio Negro. In Brazil it is considered a direct tonic to the nervous system, and a most energetic aphrodisiac. First mentioned in the writings of Spanish and Portuguese priests, in 1704, it would have played an important part in the Brazilian Pharmacopœia, had it not been very difficult to procure; yet all the native practitioners sell it, but at a very high price. The tree is not easily found, being at best rather scarce, and growing amid the tangled vegetation of virgin forests, where only the natives are able to recognize it.

The scientific study of Muirapuama, until recently, has never been thoroughly made. Led by popular belief, those who first wrote simply indicated its therapeutic virtues, more or less from hearsay; they affirmed that it was not poisonous and really possessed aphrodisiac properties. Some have sought to classify it botanically, and have held it to be a *Liriosma* of the family of OLEACEA. Kleesattel, of Stuttgart, has written a thesis on this subject, and Doctors Husemann of Göttingen, Pekott of Rio de Janeiro, and Rees of Erlangen, share this opinion. On the other hand, Mr. Glazion of Rio, a distinguished botanist, and Doctor Clemente Malcher of Para, place Muirapuama among the Acanthaceæ.

Several scientists have investigated the therapeutical properties of this substance, among them Hartwig, Holfert, Heger, Keszler, Goll, Pfaff, and Kleesattel; all consider it an energetic tonic and stimulant to the nervous system, and employed it in paralysis, rheumatism, dyspepia, and especially in impotence. Kleesattel states he cured nine cases of impotence in which damiana entirely failed. The Brazilian physicians unanimously praise its virtues; among them must be cited A. M. Baena, J. de Almeida Pinto, and Mello Maraes.

During the course of a scientific mission undertaken at the instance of the Brazilian Government, I had an opportunity of bringing back with me a large quantity of the roots, and making chemical analysis, following the methods indicated by Dragendorff. The roots, thoroughly dried, were finely pulverized, and treated in succession with petro-

leum-ether, sulphuric ether, absolute alcohol, distilled water, ten-per-cent. alkaline water, ten-per cent. acidulated water. Thus was revealed a glucoside, described for the first time, and organic matters composed of tannins, feculent substances, essential oil, phlobaphenes, and pectic matters. The proportions established by analysis are:

Water	260
Glucoside and fixed salts	2,010
Essential oil and organic substances	2,730
Total	5,000

The glucoside was isolated, decolorized, and obtained in the form of a white powder, and physiological experiments proved it the active principle of the drug.

An interesting point is the very slight toxicity of this substance. In animals who showed very active response, it was necessary to employ one gramme of extract or one centigramme of glucoside per kilogramme in order to cause death by intra-venous injection. Autopsies of animals killed by Muirapuama always revealed the intestine filled with blood from the pyloric end to the anus; the gastric mucous membrane of a general brownish-red color; the heart with a few ecchymoses at the level of the auriculo-ventricular valves, but no other lesion; the aorta colored in red, like the valves; the genital organs in the male, and the uterus in the female, slightly congested; the nerve centres, cord and coverings slightly colored. The kidneys, bladder and spleen showed no pathological changes whatever.

In cold-blooded animals the injection of a cubic centimeter preserved for several hours the movements of the lungs and heart, after the latter had been laid bare, and the reflex action continued for a long time after death.

It would hence appear that the use of this drug is decidedly indicated in neurasthenia in general, and particularly in the neurasthenic conditions of digestion and circulation, and the asthenia of uterus and genital organs, with impotency.*—Doctor C. Rebourgeon, in *Therapeutic Review.*

Apomorphine Hydrochlorate.—Very little is said regarding the use of Apomorph ne, and yet it possesses marked therapeutic value. One-fiftieth grain hypodermatically, with $\frac{1}{200}$ grain of atropine, three times a day, in neurasthenia, will quiet irritated sympathetic nervous centres; in melancholia it is positively a specific exhibited in this way. I always employ this injection in any case where morphine or any preparation of opium is used, and it does not nauseate or have any unpleasant reaction. I almost always employ atropine with it.

In hysteria, where the patient is riding a high horse in an ethereal way, I bring her back with a decided dose of Apomorphine; she finds it impossible to "throw up" and tear hair at the same time, and in a little while sleep supervenes and she awakes refreshed and sensible.

In cases of poisoning, from certain preparations at least, there is nothing so prompt. One-tenth grain, the common dose, I find very dangerous unless combined with atropine or strychnine, more especially in cases where there is cardiac enervation; one-twentieth to one-thirtieth is a maximum dose, and I very rarely use even so much. In some neurotic affections of the stomach and intestinal tube, Apomorphine will demonstrate its power, and by its action on the higher central nerves and sympathetic branches effect permanent relief. I feel enthusiastic over the drug, simply because I have used it more than any other in the class of cases spoken of, and the physiological results have been most satisfactory. When employed by the mouth, however, I have never been pleased with its action.—Doctor A. V. Barnes, in *American Medical Journal.*

The Glycerin Suppository in Gynæcology.—Doctor J. T. Graham, before the Virginia Medical Society, remarked:

The only way in which glycerin relieves congestion of the uterus and its adnexa is by depleting the engorged vessels of these organs by osmosis—owing to the great affinity of glycerin for water. Reasoning from this fact it was inferred that glycerin in solid state must have a greater effect upon the inflamed parts to which it might be applied, because it will take up a greater amount of serum and the effect be more prolonged on account of the gradual dissolving of the glycerin. I therefore introduced into the vagina, close up to the cervix, an ordinary rectal glycerin suppository, and held it in place by a pledget of wool. The effect was much superior to that of the glycerin applied with the tampon. I also had glycerin suppositories made containing one or two grains each of alum and thymol. The advantages of the glycerin suppository are:

Easy application, as it does not require the use of the speculum:

Its greater and more prolonged effect, its action extending at least over a period of thirty-six hours:

---

*Muirapuama was introduced to America by Parke, Davis & Co.

It can be used in the treatment of the virgin without the use of the speculum, and will remain in place without the pledget of wool; or if it seem best the patient can be taught to apply it herself.

Puerperal Eclampsia. — If the increased sensibility is from an over-supply of nerve-force stored away for the woman in parturition, then Veratrum and Chloral are indicated:

If a plethoric condition, the Veratrum and *Venesection:*

If a truly anæmic and impoverished condition of the blood, Morphine and aromatic spirits of Ammonia, with cautious use of Veratrum.

To secure prompt and decided relief when treating eclampsia, whether uræmia is or is not present, unless the patient is very anæmic and with a broken down constitution, I would, if she is of a full habit, draw twelve to twenty ounces of blood, use Veratrum hypodermatically, then order a quart of warm water thrown into the rectum. If the convulsions are post-partum, first use Veratrum and warm enema, and see that the bladder is well emptied. Chloral and Chloroform by no means to be ignored. I dislike morphine because of its tendency to check secretion. Apomorphia is valuable in many cases, but I have had but little experience with it.—Doctor C. D. Hurd, in *Annals of Gynæcology.*

Cannabis Indica.—This drug, the most active of non-opiate anodynes or soporifics, which was very popular years ago, although little the fashion at present, is deserving of a large share of professional favor. The principal cause which led to its disuse was fear of its toxic power, though there has never been a case of poisoning recorded from its use.

Its effect on the system is most marvellous. It causes sleep, overcomes spasms, relieves pain and all nervous irritability, and that too within a few moments after administration. Its soothing and curative effects upon the nervous sympathetic system are great, and there is no one agent that will restore the equilibrium of nerve motion more quickly. The placidity of repose that is produced by this narcotic is rapid and to the point. Further, it does not check secretion or tend to constipation. It does relieve fatigue and arouse vital action, and can and should be given freely until the effect desired is apparent.—Doctor J. H. Gardner, in *Medical Review.*

Nuclein Solution in Typhoid, Malaria, etc. —Doctor A. M. Boyer, of Philadelphia, informs the editor of the *American Therapist* that he has aborted apparently typical typhoid fever by the administration of Nuclein. At first he was inclined to believe the recoveries coincidences, but when the same class of cases that he had frequently seen develop typhoid in previous years got well one after another in a few days or a week, he could not gainsay the evidence though apparently incredible.

Doctor F. C. Wilson also recommends Nuclein in malaria, typhoid fever, and tuberculosis. He says: "In several cases of malarial fever its effect has been prompt and decided. In a number of cases of convalescence from typhoid fever the rapid improvement following its administration has been noteworthy. In tuberculosis in many of the symptoms, following its administration the patients expressed themselves as feeling better."

A New Diphtheria Remedy — Professor Loeffler, of Greifswald, who is the foster parent of the so-called diphtheria bacillus, has introduced the following, to be applied with cotton upon a probe after removing the mucus as far as possible:

℞ Menthol, 10 grammes.
Toluene, q. s. to make 36 grammes.
Absolute alcohol, 60 grammes.
Iron-chloride solution, 4 grammes.

The applications are to be continued every three hours for four or five days. It is stated that of ninety-seven cases treated by this mixture there has been but one death.

Cannabis Indica for Headache.— This drug is a specific for a type of headache that is continuous or nearly continuous, lasting weeks or even years, usually dull, but liable to become aggravated, and felt over the whole head. I give one-fourth to one-half grain of the extract in pill, morning and evening. If the case proves rebellious, gradually increase the dose.—Doctor Mackenzie, in *Medical Week.*

To Increase Lactation.—Administering to the mother volatile oils, such as anise, nutmeg, etc., by imparting a pleasant flavor to the breast milk, will sometimes cause the child to suck more eagerly and vigorously, and thus by reflex irritation of the nipples serve to increase the flow of milk which is becoming scanty.—*Louisville Medical Monthly.*

Medical Progress.

A Criticism of the Germ Theory of Disease, Based on the Baconian Method.*—The Baconian method of research involves a consideration of *all* the leading features of the subject matter. The ordinary method of what we now call scientific research is to lay hold of one fact, ride it to death, then to ignore others. I think it will be admitted that medical students, like students of all other human arts, are apt to swear upon the words of their masters and very faithfully reproduce their views. During the term of my curriculum one of our stock subjects of debate was the question as to the nosological separation of typhoid (or, as it was more usually called, "dothen enterite") and typhus fevers. The most enlightened of our teachers put the typhoid cases in his general wards, with the result that they nearly all recovered. Another of the old school put them in the fever wards, with the result that they often died of the second disease when convalescent or almost so from the first. He overlooked the one great fact, which was patent even to my juvenile mind, that a patient with typhus was either dead or practically well on the fifteenth day of his attack, whereas the fatal symptoms of the typhoid might not supervene till the third or even the fourth week. Since then typhus has been studied with more satisfactory results, and a few of these show that though it was of old and is equally now certain that it is conveyed by the impress of a germ, or poison having the life history of a germ-producing organism, very analogous in its proceedings to the germ of yeast, yet that this organism is perfectly inert when distributed on a soil not responsive to it. The cause of the disease is not the germ or organism arising from it. The cause of the disease is simply overcrowding of population beyond a point ascertained with an accuracy like that of the density bulb or the thermometer in a brewer's vat.

As clinical clerks and resident medical officers in the old infirmary of Edinburgh we know this quite well. Given a case of hæmorrhagic typhus, or one in which subsultus tendinum occurred at once, we knew within a narrow limit of error from what part of the city it came. We knew that so many hours' work in the fever wards would give us a headache, and that unless we had our evening's spin round Arthur's Seat our six months' appointment would not pass without our falling permanently victims to the disease. In one of the sessions fifteen out of twenty residents in the three great centres of typhus in Scotland—Greenock, Dundee, and Edinburgh—fell victims to the disease, and eight of them died. So awful was this that appointments were made afterwards only of men who had already gone through the ordeal; yet the disease did not spread out of its nests. The eminent medical officer of the city, Doctor Littlejohn, has solved its riddle, and has practically demolished the disease. He began its study about 1845, and he tells us that in the great outbreak of 1847–8 there occurred an outbreak of which over 6,000 cases were treated in the infirmary alone, and how many outside can never be known. The mortality was awful; it can only be guessed at, probably being not less than twenty per cent. The outbreak, to use Doctor Littlejohn's own words, "so frightened fathers of intending students, and general visitors, that Edinburgh as a seat of a medical school, and as a residential city, was nearly destroyed." It acquired the name of the "fever city," a cognomen amply justified, seeing that at least fifteen per cent. of its population were attacked within two years. Active and energetic steps were taken, huge blocks of tenements were destroyed, dense populations were scattered, and wide boulevards cut through the worst parts of the old town, and no such outbreak has since occurred. But the history of the extinction of the disease has been gradual, for such work as had to be done was hardly the work of one generation only. In 1857–8 the number of cases known fell to 139. In 1863 there were fifty-seven deaths, representing a number of cases to be given by calculation as about 350. In 1879 the Notification Act came into force, and the exact number of cases as well as the deaths can be given with accuracy. The number fell steadily. In 1889 there were forty-three cases with nine deaths; in 1892, eighteen cases with three deaths; in 1893, six cases with one death; and this year, so far, there has not been a single case reported. (Two cases reported since this was written.)* But this is not all, by any means. The fever districts were in the old town, the regions of Cannongate, Trongate, St. Giles, and Cornmarket, having in 1861 an average population of 220 to the acre. By 1881 this was reduced to 166 persons to the acre, the interval representing the time of the chief clearance of the infected area.

*Abstract of paper read before the Birmingham and Midland branch of the British Medical Association.

*Of these cases Doctor Littlejohn writes to me that they were imported from Glasgow, and that they have given rise to no fresh cases in Edinburgh.

The worst cases we had when I was a student were from the high lands of the Tron, where the population then was over three hundred to the acre, and some closes in the Grassmarket, where it probably was higher. Now the average population has been reduced to less than half, and the very worst places have been completely emptied, and typhus has disappeared. Not a case of typhus has ever been known in Birmingham, where no part has ever been populated to such an extent, and practically typhus is unknown wherever the population is below 150 to the acre, and it occurs with certainty when it is over 200. Its occasional manufacture by temporary overcrowding in army barracks, in ships, prisons, etc., has been illustrated over and over again till we are forced to the conclusion that the poison, whatever it is, is the result of the same cause as that which gives it its powers.

I now come to the crux of my discussion, the application of the so-called germ theory to the practice of surgery, and to an explanation by it of the want of success in surgical practice, which ought to be and has been often and most successfully attributed to other agencies altogether; and to an explanation of modern success and advances in surgery alike erroneously attributed to the "germ theory" and the so-called antiseptic surgery.

In bygone times there used to be a very prevalent, and even now there is a far too prevalent, disease of protean form which infested, and does still infest, the surgeon's work. We used to call it surgical fever, pyæmia, sapræmia, and now it is called septicæmia—all of which names were coupled with certain doctrines, about which I shall not trouble you. It always was more or less closely associated with views about inflammation. A doctrine of the past generation was that inflammation was *sthenic* and *asthenic*, and that our present malady was associated with the latter form. Then came the discovery of the germ factor in the process of put efaction, and the explanation of the methods of sterilization, and a false conclusion was built up concerning surgical practice, that the ill results were due to the entrance into wounds of the germs of putrefaction. Then a few special, or at any rate special-looking, germs were identified as the particular germs to be dealt with, but unfortunately for them, Bacon's inevitable law throws them out of court. The far more logical position was the assumption that the ever and everywhere present common or garden germs were the cause of the trouble, and by far the most logical method of dealing with them was the spray. It looked so logical and it was so imposing, that there is no wonder it rushed headlong into popularity. I laughed at it and ridiculed it, and now it is pretty well done for, and to the detriment of nobody but the surgical-instrument makers. But that very spray was the cause and means of a discovery by Lister so great that he deserved everything he got in the way of honors, though he did not understand it at the time. I don't think he yet understands the greatness of the discovery he made. I have never tired of pointing it out, but I have never been fully listened to; and when I hailed with triumph the complementary discovery of Hamilton and sponge grafting, I shouted to deaf ears.

Lister's discovery was, like all great things, very simple! It was only this: that a blood clot may, and under certain circumstances does, retain real life; or at least it is so far removed from complete death that if aided by preservatives it will increase in vitality and be even finally, as we say, organized. He filled a big hole in a man's heel with protected blood clot; he kept out the common or garden germs, and that blood clot got organized and filled up the hole. Of course it must not be forgotten that all these phenomena were known in domestic science for centuries before, but their surgical importance was not recognized; and certainly Lister's discovery was new in so far as it referred to blood clot not covered by skin or other living tissue, but directly exposed to air—air altered and deprived of its dangerous elements. Then came Hamilton, who showed that material actually dead—dead beyond all question—could be so prepared as to adapt itself to tissue of the feeblest kind, granulation cells; could be used by them as a temporary endoskeletal arrangement, and removed by them by the common process of absorption when they were no longer in need of it.

I have tried to estimate how many reparative operations I have performed on the perineum, and I find that it cannot be much short of fifteen hundred, as in one year I have records of two hundred and twenty-six, whilst for many years I kept no record of them at all, and do not now. If we take them at a thousand it will be enough for my purpose. I have all the records of death certificates that ever occurred in my practice, and there are only two deaths associated with that operation in all my work. Both were old women nearly seventy, on whom any operation, however slight, would have been serious, and in one certainly death occurred from a cause (apoplexy) not a result of the operation, not dependent at least on the question now to be submitted. My mor-

tality, in its greatest reckoning, in this operation, is under .02 per cent. My American friend who criticises my proceedings in most unintelligent and almost unintelligible fashion, gives his own mortality as over five per cent, and gives the following rules for operation:

"Before and after every operation, wash all instruments in very hot carbolized water, and during every operation keep all instruments immersed in carbolized water. Sutures and ligatures, if of silk and silkworm gut, are boiled in a dilute solution of corrosive sublimate, and kept immersed in the same until used. Catgut is soaked in oil of juniper, and preserved in alcohol.

"Always bathe denuded surfaces, both before and after approximation by suture, with a 1-to-10,000 solution of corrosive sublimate.

"Always destroy sponges used in any operation which admits of the possibility of their being contaminated by septic fluid.

"Irrigate the vagina daily if there is a discolored or offensive discharge. Prevent the introduction of septic germs from without by covering the vulva with a pad of sublimate gauze, which is to be changed as soiled.

"Before every operation let the operator and his assistants cleanse and disinfect, not only the part to be operated upon, but also their own hands and arms, in order that every possible suspicion of septic infection may be removed."

This writer is clearly carrying his convictions to their logical conclusion; but that neither are his convictions based on fact, nor his conclusions in the least degree necessary, is proved by the fact that my mortality is less than his, as one is to two hundred and fifty; yet I never in this operation used a single precaution such as he believes to be essential, nor anything approaching to them. We have, therefore, here the so-called "germ theory" and its antiseptic precautions knocked on the head by one of the main features of Bacon's law, the effect in the most intense degree being constant when the alleged cause is absolutely absent — the effect produced without the cause. There may be among you some who would assert that neither division of the umbilical cord nor repair of a damaged perineum is a sufficiently serious operation to make any mortality at all. There is then no truth in this alleged germ theory, for the logical deduction of that theory is that the entrance of a germ or germs to any wound whatever is capable of producing systemic septic evils and death. But we must carry the matter further, and into the realms of more general surgery, for has not our President said: "Lister proved conclusively, and his proofs have been confirmed by many others, that ordinary cleanliness in the dressing of wounds, either made or treated by the surgeon, was not sufficient, but that the use of some kind of antiseptic was absolutely necessary to avoid the risk of septic infection."

Now, sir, you have seen a good deal of my operation work, and I challenge you or anyone to say that they have ever seen anything about it save absolute cleanliness. Since the time—nearly twelve years ago—when I ran through a sham Listerism, ending with cold-water spray, never has anything in the shape of an antiseptic been used in the treatment or dressing of wounds. Yet my published statistics have not yet been either contravened or beaten in their record. Lister has admitted these two facts, and has pathetically pleaded that there is something in the abdomen which transcends his chemicals. My answer is, it is not so. The abdomen is the only region where we have yet had competing and perfect statistics. I have challenged Sir Joseph over and over again to produce his operation statistics, but with a lordly indifference, or something else, he pays no attention to the challenge. We are constantly hearing from his followers as to the marvellous improvements in results obtained under each and every new phase of the details as they come out, but before they are six months old they are pronounced failures and something new has its turn. The last of all of these numerous phases is the disuse of all chemical destroyers of germs and the abandonment of "antiseptic surgery," and the adoption of "aseptic surgery"—the perfect cleanliness which I have been preaching for years; and, forsooth, this is then the "newest Listerism."

But in order to bring logic to bear in the discussion again, let us go back a generation —I have seen it out all but two years, for I am now in my twenty-eighth year of practice —and see what major factors have contributed to surgical success, if success there has been. First of all, has there been success in the sense that what we may call *coarse* surgery is more successful than it used to be? I do not use this word at all with any disdainful intent; I only mean the class of surgery anybody may do, such as amputations. The finer surgery, such as ophthalmic work, operations for hernia, ovariotomy, tying of arteries, etc., depends so much on the personal skill of the operator that it cannot with success be used in such an inquiry; besides, in general hands there are not cases enough. Amputations, especially those for disease, form by far the best test. But can we find them

so as to put them up as a test? I think not; certainly I have failed to find them, and the writer who puts them forward would do infinite service to surgery. Let me see a list of 500 amputations below the knee for disease, done under fairly good circumstances, and without any of Lister's dodges; and another list of 500 under equally good circumstances, but under the completed system of germicides last announced and most believed in, and we might get some notion of the value of the latter. The mortality of the second list would have to be less than five per cent. before we accept it as worthy of what it pretends to be, for that mortality is proved to be nearly the normal mortality of the operation in question.

As I look back at my early experience of surgery, my wonder is that I ever stuck to it. In Edinburgh, during my pupilage from 1861 till 1866, I saw some thirty ovarian and other abdominal tumors removed without one single recovery, and I left the land of my birth with one fully made resolution—that I would never open an abdomen. In Edinburgh, if I saw an amputation of the thigh in the Old Infirmary on a Wednesday, there was a strong probability that in the following week I would see the bared bone sticking up through the anterior flap. If a breast was removed, an erysipelatory reddening of the flaps would probably occur on the third day and be halfway round the chest before the week was out, the wound gaping, and everything going to the bad. Erysipelas indeed was rampant. I left Edinburgh and have been engaged continuously ever since, with very slight interludes indeed, in making wounds, till they have mounted up to many thousands, and I have never seen a case of erysipelas in my own practice—not one. This, of course, gives exactly the other side of the picture, and an enormous improvement. It does not in any way belong as a result to chemical germicides, because I don't use them, and never did save in the few months of the experiment above alluded to.

In what lies the improvement? The answer is simple; it lies in separation of patients, plenty of cubic space and fresh air. The road to this conclusion was opened by Simpson, in his book on "Hospitalism;" he showed that the mortality of amputation below the knee for diseases diminished, as did that of all amputations, just in proportion to the size of the hospital, and the crowding of the patients which naturally resulted. This was confirmed by my own research and independently by others. It would then clearly need, according to Bacon's canon, to be shown that by chemical antiseptics the mortality of this operation is brought down in the largest class of hospitals lower than it is in the smallest before the slightest credit could be given to it. Since then most of our large hospitals have been rebuilt with the most extensive improvements, and it is truly pitiable to look at the records of mortality of some that have not. Amongst the latter is King's College Hospital, and the records there (I have had a private glance at some of them) are so bad that they dare not publish them; at least, I have challenged them to do so for the last sixteen years and they have not done so. Even in cases where these large hospitals have not been rebuilt, their surgical overcrowding has been remedied by the building all round them of small hospitals, no better example of this being possible than the change effected in our own city within these last twenty-five years.

The conclusion of the argument is that this surgical scourge is but another form of typhus —a view which is by no means a novelty— the result of overcrowding wounded and discharging surfaces. The results of experiments - generally on a scale of ghastly magnitude and with dreadful results—have shown that without overcrowding the effect is rarely present; with overcrowding it always is, and above all things the experiments of irritating surgery have shown that just in proportion as the intensity of the cause, so is the effect varied. All the clinical facts spoken of concerning typhus bring out the analogy with increasing strength. It was Simpson who cried out after Howard against overcrowding in hospitals. It was Simpson who cried out most loudly for better ventilation and cleanliness, and against the use of dirty hands and sponges. It was he who taught after Semelweiss the doctrine of contagium vivum in midwifery, and appealed for the aseptic treatment of lying-in women. By anæsthetics it was Simpson who made all our modern surgery a possibility.

He has been dead hardly these five and twenty years, and all this splendid work is as much forgotten as if it had never been done, and the glorious progress which has come out of it is given to a theory which is no theory at all but a phantasm, to a system which has been proved an inconstancy and a broken reed—a thing which yields at every blast either to scholastic logic or eclectic experiment.—LAWSON TAIT, in *Medical Press and Circular*.

NEW METHOD OF EXTRACTING THE AFTER-COMING HEAD.—Pulvermacher, of Breslau, refers to the fact that in many cases the head

of the child is found in such position that the occiput, resting partly or wholly upon the pelvic wall is bent at an angle to the neck, and that the hand can only feel an ear and the presenting part of the cheek or the zygoma. The other parts of the face, forehead, eyes, nose, mouth, and chin, cannot be felt. The known methods partly cannot be applied, and do not bring about the desired results. In such cases a dull double hook is guided by the hand to the region of the zygoma, somewhat beneath the infra-orbital margin, and the blunt end of the instrument, which is hook-shaped, is, with the hand in the vagina, firmly pressed against the head, while on the other hook-shaped end, which projects from the genitals, firm traction is made by the other hand. The nurse makes traction during this time with one hand on the legs of the child directing it downward, and presses with the other hand through the abdominal walls upon the head. The face turns immediately towards the sacral hollow, and the child's head will rapidly be delivered. The part of the face upon which the hook has pressed shows no injury, hardly an abrasion of the skin.—*Centralb. att für Gynäkologie.*

Effects of Poisonous Food.—An eruptive skin-disease now prevailing in London almost as an epidemic, mostly in workhouse infirmaries, has been ascribed to the milk supply. Bacteriological examinations of milk supplied to several infirmaries gave no results indicative of a causal relation. The malady has a death-rate of over ten per cent.

In the same number of the *British Medical Journal* which contains the foregoing is statistical information as to the effects of poisonous food. During the months of June, July, and August, nearly one hundred cases with five deaths were reported, mostly from canned meats. The symptoms were: vomiting, diarrhœa, severe abdominal pains, cramps, and collapse—symptoms that might readily give rise to suspicions of criminal poisoning. A case has recently been reported in which the greater part of the population of a village in Russian Poland was made ill by eating tainted herrings.—*Medical News.*

Prolapse of Rectum.—The improper performance of the physiological functions of the rectum contributes greatly to the advancement of rectal disease and to the sufferings of the afflicted:

The comple vicarious discharge of fæces through an artificial anus located in the sigmoid flexure reduces the physiological demands on each structure of the rectum to a minimum:

The lessening of the physiological requirements is commonly in direct proportion to the diminution of the fæcal flow through the rectum:

The cessation or lessening of the fæcal discharge per rectum exercises a palliative and curative influence on diseases of this portion of the intestinal tract.

In certain cases of obstinate rectal prolapse the formation of a vicarious channel for fæcal discharge is justifiable, both as a palliative and curative measure.—Doctor Bryant, in *Matthews' Medical Quarterly.*

New Nomenclature.—Doctor Moses Kleiner recently presented to the class of Gross Medical College, Denver, a case of "*paraguesia.*" Now the average reader may not know, at a glance, what is the meaning of this peculiar term; for the benefit of such Doctor Kleiner's definition may be given:

"Perversions of taste are found in excitable nervous states, in the hysterical and insane generally in the form of *hyperguesia* or hyperæsthesia of taste. We have also diminution (*hypo guesia*) and loss of taste (*aguesia*) due to nervous lesions, both local and central, of the gustatory apparatus. *Paraguesia* (bad taste) and a sense of dryness are the disagreeable symptoms for which the patient seeks relief."—*St. Louis Clinique.*

Interesting Facts about Cochineal Insects.—The embryos develop completely within the mother, but are born within eggshells. The red pigment is not found within any organ apart from the diffuse fatty body and the yolk; it does not occur in skin, gut, salivary glands, excretory tubules, or blood, and nothing is yet known regarding its use to the insect. Carminic acid is said to be a product of metabolism. The coccerin secreted by the wax glands, which are particularly abundant near the anus, serves to inclose the excreta and so prevent the body of the insect being soiled. It passes out in long threads by the "wax-hairs" and in short curved ones by the "wax-pores."—Doctor Paul Meyer.

Pneumonia.—Osler believes pneumonia is a self-limited disease, and runs its course uninfluenced in any way by medicine—that it can neither be aborted or cut short by any known means at our command.

The Medical Age.

VOL. XIII. DETROIT, JANUARY 25th, 1895. NO. 2.

Original Articles.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 13.*]

FOURTH OR ANATOMIC PERIOD.—As already seen, Alexander the Great and his successors collected the intellectual and natural riches of the universe, as they knew them, and placed them at the disposal of studious men to benefit humanity; their complete value has not yet been exhausted, and never can be. This undertaking was carried out under conditions that made it one of extreme difficulty: Manuscripts were then rare and most costly; but few copies of a given work were in existence, often only one, and these were held almost priceless. Under these circumstances the establishment of a public library and of a museum was an act of philanthropy and liberality simply beyond eulogy, and did more to immortalize the founder of the collection than all his victories and other achievements.

This appears to have also occurred to two of Alexander's lieutenants—one Eumenes, governor of Pergamos, and the other Ptolemy, governor of Egypt. After the death of the conqueror his generals shook off all dependence upon central government, and endeavored to centralize their own authority. But these two were the only ones among so many leaders who did not devote all their attention to armies and invasion, but interested themselves in commerce and arts. So active were they in the enterprise that Eumenes had gathered 200,000 volumes for the library at Pergamos, and Ptolemy six to seven hundred thousand for that of Alexandria. The latter was divided into two parts, the greater and the lesser, the latter of which was kept in the temple of Serapis, hence known as the *Serapium*. These notable efforts to found enormous collections first excited praiseworthy rivalry among contemporaries and rulers, which, however, degenerated into contemptible jealousy, so that some of the rulers of Alexandria even went so far as to interdict the exportation of papyrus in order to prevent the making of copies for the library of Pergamos. But the effect was unexpected, since it led to the invention of the paper of Pergamos, otherwise called parchment, which completely displaced the bark from which papyri were made. Be this as it was, the collection at Alexandria had a much more marked influence on the medical study of the future than that of Pergamos, and calls for our particular notice. About it sprang up first a collection of learned men, and then the inevitable result—a school of learning. It was Ptolemy Soter who called around him the most renowned men of his day. He provided them with homes adjoining the library, endowed them with salaries, and charged them with the classification and collation of manuscripts, or with the giving of instruction by lectures and discussions. Ptolemy himself sometimes took part in these feasts of reason, which became still more frequent and formal under his son Ptolemy Philadelphus. These were called the Feasts of the Muses and of Apollo, *i.e. ludi musarum*, and consequently the place where they were held came to be termed the *museum*. Often the subjects for discussion were announced in advance, and those who gained the most applause received rewards in accordance with the merits of their work. Among those who enjoyed these advantages under the reign of these two Ptolemies are prominently named two physicians, Herophilus and Erasistratus, the latter

*Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

said to be the grandson of Aristotle. It was under this Philadelphus that the Hebrew wise men translated into Greek the Holy Scriptures, which translation has since been called the Septuagint—so called because it is supposed to have been translated by the members of the Sanhedrim which was composed of about seventy men, or because, according to another legend, it was translated by seventy-two men in seventy-two hours. These savants of ancient Egypt, thus supported by the dynasty of the Lagides, gave the first place to the science of medicine. As regards this study, the school of Alexandria eclipsed almost from its origin the ancient schools of Cos and Pergamos, and during its existence was the leading institution of its kind in the world. At the time of Galen it was sufficient to have studied there, or even to have resided for a short time in Alexandria, to obtain the reputation of being a physician. Nearly all the scholars of these five centuries had received instruction in this school. The principal reason for its eminence in medical instruction was the practice of dissection of human bodies which, under the Ptolemies, was allowed and recommended, and by which the science of medicine received an extraordinary impulse. Although the prejudice of Egyptians was very strong against those who touched a dead body, the Ptolemies themselves are said to have participated in this kind of anatomical study, thus destroying by their example the odium previously attached to dissection. Strange to say, however, the practice of dissection fell into disuse toward the end of this Anatomic Period, and scholars preferred to indulge in subtle metaphysical discussions rather than study human tissues. But the principal reason for giving up this practice was the Roman domination of Egypt; the Romans, inconsistently, being perfectly willing to see any amount of blood shed in the arena, and all sorts of inhumanities practiced upon living human beings, but holding that contact with a corpse was profanation, so that not a single anatomist of reputation had his origin in ancient Rome. "If on any occasion," says Renouard, "a foreign physician attached to the king or general desired to avail himself of the occasions that were afforded to examine the structures of the internal parts of the human body, he was obliged to conceal and carry off during the night some body abandoned to the birds of prey." To complete the melancholy termination of the Anatomic Period, the labors of the writers of those days were all lost by the burning of the great library by Julius Cæsar, which was the beginning of the chain of disasters with which Egypt was accursed under Roman dominion. Although Mark Antony, induced thereto by the endearments and solicitations of Cleopatra, transported the library of Pergamos to Alexandria, even this was unavailing to restore the position of the school, since the atrocious and imbecile Caracalla took from the pensioners of the museum their privileges of common residence and every other advantage, and suppressed all public exhibitions and discussions. I can mention but few of the names most eminent during this Anatomic Period, and but a short account of the life and work of each:

The first deserving of mention was Herophilus, who was born in Chalcedon about the end of the fourth century before Christ, and supposed to be the first to undertake systematic dissection of the human body. The so-called Torcular Herophili, or common meeting-place of the sinuses at the occiput, named after him, gives evidence of his influence upon the study of anatomy. He wrote on all departments of medical science, concerning the eyes, the pulse, midwifery, etc., as well as numerous commentaries upon the Hippocratic writings—describing the membranes of the brain and its vessels, the choroid plexus, the ventricles of the brain, the tunics of the eye, the intestinal canal, and certain portions of the vascular system. He alluded to the thoracic duct without knowing its purpose, and gave a more accurate description of the genitalia than any previous writer. Strange to say, but little is known of his later life, and of his death absolutely nothing.

Erasistratus was the son of Cleombrotus, a student of Metrodorus, and lived for some time at the court of Seleucus Nicator, whose son Antiochus he healed of a secret ailment, which happened to be a desperate love affair with his mother-in-law Stratonice. He wrote extensively on fevers, hygiene, paralyses, therapeutics, and many other subjects;

regarded most diseases as due to over-indulgence in food, which is not digested—and consequently putrefies. Plethora was for him the prevailing disease, against which he employed not only venesection, but fasting, and bandaging of the extremities. He was a diligent student of anatomy, and carefully described the brain in many of its grosser features, regarding it as the seat of the soul and the centre of the nerves. He also described more exactly than his predecessors the valves of the heart, which organ he regarded as the origin of veins and arteries. He discovered the lymph-vessels, and maintained, against Plato and others, that the epiglottis prevents the entrance of fluids into the lungs, but he supposed digestion to be produced by mechanical trituration in the stomach, and preferred gymnastics, exercise, diet and baths to drugs or other therapeutic measures. He died about 280 B. C.

Aretæus, who died about 170 B. C., was one of the most brilliant lights of antiquity previous to the Christian era, but, in spite of all this, of his life but very little is known. He came from Cappadocia about the end of the reign of Nero, and lived in Alexandria. That he lived in Alexandria is apparent from his numerous references to its location, to the habits and therapeutics of the Egyptians, and to the geography of the country. Furthermore, references to its diseases abound in his writings, so that it is made to appear that he had had the best advantages there, although he must have traveled extensively. But a small portion of his writings remains, and this consists for the most part of compendiums of pathology and therapeutics. He described disease, not in anatomical order from head to foot, but under the classification of acute and chronic. With the exception of Hippocrates he has shown himself the most free from vague, arbitrary speculation and from the dogmatism of the schools, of any writer of antiquity. He, more than any other up to his time, endeavored to found pathology upon a sound anatomical basis. For every picture of disease he endeavored to provide a suitable anatomical accompaniment. This appears particularly, for instance, in his description of intestinal ulcers due to dysentery, or the paralyses following brain affections, or his description of pharyngeal diphtherias, of which he gave a good account under the name of Syriac or Egyptian ulcers. Pulmonary tuberculosis, tetanus, and anal fistula are amply mentioned in his writings. His therapeutics were simple and rational; he laid great stress upon dietetic treatment. His surgical writings appear to have all been lost, but there is every reason to think that he brought to bear upon external medicine the same good sense which he applied to internal affections.

Cornelius Celsus, the most celebrated author for a number of centuries, was born in Rome about the time of Christ. Brilliant as he was, he exerted a widespread influence for centuries. The exact date of his death is unknown. He was a contemporary of the greatest philosophers, poets, and savants of Rome during its most brilliant period. He studied rhetoric, philosophy, the art of war, economics, and medicine — he was, in fact, a walking encyclopedia of the knowledge of his day; but it is in medicine that he shows to best advantage, and in his capacity as a physician he was and is best known. The direction in which Celsus appears to least advantage is in failure of power of direct observation, and in yielding unquestioning obedience to the views and dicta of Hippocrates, for whom he possessed the greatest reverence, not being able to brook any serious contradiction or opposition to his opinions. In this reverence for Hippocratic authority he was followed by many less prominent successors, the consequence being a failure to train men as observers; the endeavor being to make them simply storehouses of information derived from Hippocratic writings. As a result Celsus wrote but little, or else his writings are lost. He contented himself mostly with a mere commentary upon the writings which he so highly revered. But little of his writings remain, and these pertain mostly to the therapeutics of curable disease, dietetic, pharmaceutical, and surgical. Although he exercised great authority during his period, he was later totally supplanted by Galen, and his views are seldom mentioned in the writings of those subsequent to this great physician. His death must have taken place during the first century after Christ.

Of all the students of Hippocratic dogmatism, the most earnest, skillful, and learned

was Claudius Galen, a native of Pergamos, a place already celebrated for its temple dedicated to Æsculapius, for its school of medicine, and for a library which had been removed to Alexandria. He was placed by his father under the most distinguished teachers in all of the sciences, and even as a young man showed extraordinary progress, and became early a disputant with the most erudite in grammar, history, mathematics, and philosophy. He has related how in two different dreams he was urged by Apollo to study medicine. He traveled widely for instruction, and remained some time in Alexandria. On his return to his own country he was charged by its ruler to dress the wounded in the great circus, which furnished him opportunity for displaying all his anatomical knowledge and surgical skill. Not remaining long at home, he went to Rome, where his renown had preceded him, and where by his brilliant elocution, his accurate logic, and his profound erudition, as well as his versatility and practical skill, he at once took the highest place. But here his rapid success, his vanity, his disdain for his colleagues, and his useless boasting, as well as his natural jealousy, gained him the enmity of nearly all his contemporaries, and his stay at Rome was thereby made very disagreeable. In his work on Prenotions he accuses his colleagues of base jealousy and stupid ignorance, lavishes upon them such epithets as "thieves" and "poisoners," and closes by saying that after having unmasked them he would leave them to their evil designs by abandoning the great city to seek a home in a smaller place, where the surroundings would be to him more congenial. This threat he carried out, but soon returned to Rome upon an invitation of the Emperors Marcus Aurelius and Lucius Verus, whose confidence, as well as that of their successors, he enjoyed. He is supposed to have lived to the age of seventy-one, and to have died about 200 A.D. Galen strongly denied being attached to any of the sects of his day, and regarded as slaves those who took the title of Hippocratists, Praxagoreans, Herophilists, and so on. Nevertheless his predilection in favor of the Hippocratic writings is well marked, for he explains, comments upon and amplifies them at length, refutes the objections of their adversaries, and gives them the highest place. He says: "No one before me has given the true method of treating disease; Hippocrates, I confess, has heretofore shown the path, but as he was the first to enter it he was not able to go so far as he wished. . . . He has not made all the necessary distinctions, and is often obscure, as is usually the case with ancients when they attempt to be concise. He says very little of complicated diseases; in a word, he has only sketched what another was to complete; he has opened the path, but has left it for a successor to enlarge and make it plain." This implies how he regarded himself as the successor of Hippocrates, and how little weight he attached to the labors of others. He held that there were three sorts of principles in man: spirits, humors, and solids. Throughout his metaphysical speculations Galen reproduces and amplifies the Hippocratic dogmatism. Between perfect health and disease there were, he thought, eight kinds of temperaments or imperfect mixtures compatible with the exercise of the functions of life. With Plato and Aristotle he thought the human soul to be composed of three faculties or parts: the vegetative, residing in the liver; the irascible, having its seat in the heart; and the rational, which resides in the brain. He divided diseases of the solids of the body into what he called *distempers;* he distinguished between the continued and intermittent fevers, regarding the quotidian as being caused by phlegm, the tertian as due to yellow bile, and the quartan as due to atrabile. In the doctrine of coction, crises, and critical days, he agreed with Hippocrates; with him he also agreed in the positive statement that diseases are cured by their contraries. From all this it will be seen that Galen must be regarded as one of the earliest of Hippocratic dogmatists. He was a most extensive writer, and it is said that the total number of his works exceeded one hundred. His contributions to anatomy were not insignificant. For myology he did a great deal. He wrote a monograph on the skeleton, in which he recommended that bones be seen and handled, not merely studied from books, and that the student should go to Alexandria where teachers would place before him the real human skeleton. It has been inferred that there was not, in his time, in Rome a single skeleton.

He wrote fifteen books on anatomy, of which six are lacking; also an extensive treatise on the lesions of the human body, distributed among seventeen books which have come down to us. He is supposed to have introduced the term "symphysis," and he described nearly every bone in the human body. By him the muscles were no longer considered as inert masses and tissue layers serving to cover the bones, but he classified them according to their distinct functions, and studied separately their form and uses. The location of the vessels and nerves between them was also noted, and it was proved that muscles were indispensable to the accomplishment of voluntary motions. Galen was perhaps the first vivisector of all, since he exposed muscles of living animals and showed how alternate tension and relaxation of distinct groups set the bones in motion after the manner of levers; he named a great number of them, but curiously took no note of others. His classification according to their uses is followed down to the present day—*i. e.*, flexors, extensors, etc.

The Hippocratic authors confounded the arteries with the veins. Praxagoras first distinguished two kinds of vessels which he supposed to contain air, whence the name artery. Aristotle and Erasistratus maintained this view, which prevailed until the time of Galen, who devoted a book to the refutation of it, basing his argument upon the observation that always when an artery is wounded blood gushes out. How near he came to being the discoverer of the circulation may thus be seen. A little less reverence for authority and a little more capacity for observation would have placed him in possession of the knowledge, lack of which for so many centuries kept back the whole profession. He thought the veins originated from the liver—in this respect being behind Aristotle, but considered the heart as the common source of the arteries and veins. Even the portal system of veins mixed him up, and he erroneously described a superior and inferior aorta, but atoned for this by describing the umbilical veins and arteries. Aristotle also had supposed all the nerves originated from the heart, but Galen stated that they are derived from the brain and spinal marrow, and pointed out two kinds of nerves: those of sensation, which he thought proceeded from the brain, and those of motion, which he considered to originate in the spinal marrow. Thus he described distinct nerves of sensation and motion, but sadly confused their anatomy. He seems also to have had some notion of the great sympathetic, although it was by no means accurate. He suggested the division of the principal nerves, in order to prove the fact that nervous energy is transmitted from the encephelon to other parts of the body. He speaks of glands, and thought they discharged their secretions through veins into the various cavities, but regarded them rather as receptacles of excrementitious matter than as agents for secretion of valuable fluids. He even regarded the mammæ as glandular bodies in this sense, although he knew of course the value of their secretion. To Galen we owe the division of the body into cranial, thoracic, and abdominal cavities, whose proper viscera and envelopes he described. He spoke of the heart as having the appearance of a muscle, but differing from it. He regarded it as the source of natural heat, the seat of anger and of violent passions. He appreciated that inspiration is carried on by enlargement of the thoracic cavity. He thought that atmospheric air entered the cavity of the cranium through the cribriform plate of the ethmoid and passed out by the same route, carrying with it excrementitious humors from the brain which were discharged into the nasal fossæ. But some portion of the air thus entering remained, according to his views, and combined with the vital spirits in the anterior ventricles of the brain, from which combination originated the animal spirits and immediate agents of the rational soul. These acquired their last attenuation in the fourth ventricle, whence they would pass out drop by drop through a round, narrow tube.

From this brief *résumé* of the anatomy and physiology of Galen it will be seen that by the end of the second century of the Christian era immense progress had been made since the foundation of the Alexandrian school, and that it was due to the impetus in the study of anatomy given by Herophilus and Erasistratus, who not only made numerous dissections but resorted to frequent vivisections. It is even said that Herophilus did

not hesitate to employ his knife on live criminals who were subjected to him for experiment; but this has been a popular tradition about almost every anatomist of antiquity, and there is no evidence in confirmation of the unkind rumor, although that such experiments might be legally and justly performed has occurred to the minds of many. But zeal for dissection rapidly cooled off, and Galen barely mentions five or six men who devoted themselves to it in the space of nearly 400 years down to his time. He speaks of *Rufus* of Ephesus, who lived under Trajan, of *Marinus*, who wrote in the beginning of the second century A.D., and of *Quintus*, who instructed his own preceptor. None of them left a reputation, however, approaching that of Herophilus and Erasistratus, with whom Galen alone could compare by the number of his experiments and his discoveries. Galen strove as hard as one of his position might, by example and precept, to awaken in his contemporaries a desire for anatomical knowledge, but could not overcome their indifference. After him the practice of dissection appears to have been lost, either from the redoubled prejudices of the superstitious who opposed it, or as the result of the apathetic ignorance or the ignorant apathy of the physicians.

It has been shown that during the Hippocratic era and subsequently the physicians even of primitive times followed more or less by instinct the empirical method. Acron of Agrigentum was a contemporary of Pythagoras, and affirmed that experience is the only true foundation of the healing art. Hippocrates, however, showed himself more anxious to report faithfully clinical facts than to dispute theoretical views.

The surprising progress in anatomy and physiology made during the first portion of the Anatomic Period and during the better days of the Alexandrian institute did not keep men from confounding several different points in the Hippocratic doctrine, by which confidence in the same was naturally shaken. Thus many new speculations were hazarded which nullified each other. In the midst of this confusion practitioners continued to seek in experience a refuge from the incessant variations of dogmatism and the sterile incertitude of the skeptics. Thus Empiricism as a school of practice became placed upon a firmer and firmer foundation, and the Empirics of that day seem to have laid the true basis of our art. Their doctrine took at first a rapid growth, and Galen spoke of it with great regard. The circumstances under which it was proclaimed were most favorable for its propagation. Theories had fallen into confusion; practice, methods and opinions were questionable. Everything was conjecture, and that which rested on the evidence of facts was by the empirics received with enthusiasm. Although founded on pure observation, it did not put an end to differences of opinion, and in the eyes of the ancients it lacked in solidity, because it did not attach itself to any philosophic theory then known. This doctrine was then best able to captivate physicians on account of its simplicity, contrasted with the general inability to satisfy speculative minds; but for this very reason it subsequently fell into disgrace and the term "empiricism" became synonymous with ignorance. For centuries condemned and despised, it was revived from its long humiliation under the name of the Experimental Method, and achieved, after the labors of Bacon, Locke, and Condillac, almost universal dominion in the sciences.

This doctrine had been proclaimed for about a century, during the period of which we now speak, but later led men into a fondness for secondary generalities or for the elevation and magnifying of trifles, which confused their minds and terminated its usefulness to science. Meanwhile a man of great intelligence, renowned as an elocutionist, well versed in the doctrine of philosophers and grammarians—namely, ASCLEPIADES of Bythinia—came to Rome with the intention of teaching rhetoric. By his talent and personal address he soon became one of the most illustrious persons in the Roman Republic—so early as 150 B.C. he enjoyed a high reputation as a rhetorician, and was one of the intimate friends of Cicero; nevertheless he abandoned letters, undertook the practice of medicine, and sought moreover to create a new system, being unwilling to follow in the track of his predecessors. Imbued with the philosophy of Epicurus, who was then in high repute, he deduced from it a theory which was in harmony with the philosophy of

the day. He thought that the elements of the body existed from eternity; that they were indivisible, impalpable, and perceptible to the reason only. These elements he named *atoms*, which were supposed to be animated by perpetual motion, and from which, by their frequent encounters and fortuitous contention, all sensible phenomena were supposed to result. He explained the properties of the body by saying that compounds were aggregates of atoms, differing very much from atoms themselves. Solid silver, he said, is white, but, reduced to powder, appears black; the horn of the goat, on the contrary, is black, but if it be razed its particles are white. This, it will be seen, was the parent of our present atomic theory. He ridiculed the theories of Hippocrates concerning coction, crises, etc., and sarcastically called the Hippocratic treatise on therapeutics "a meditation on death."

Asclepiades based his own therapeutics on endeavors so to enlarge the pores of the human body that disease could find egress, or so to constrict them that it could not enter; consequently he rejected all violent remedies, such as vomits, purges, etc., and his favorite remedies were hygienic—for the most part bodily exercise.

A celebrated disciple of Asclepiades was THEMISON of Laodicea (B.C. 50), who was led by the teachings of his master to lay the foundation of the so-called *Methodism* as opposed to *Dogmatism* in the school of Cos. By him and his followers a very arbitrary arrangement of diseases was made, according to what they considered the constrictive or contracted, the fluxionary, congested or relaxed, and the mixed forms. From this division of diseases it appears that according to the methodists there were only two kinds of therapeutic indications to follow—namely, to relax where there was constriction, to constrict where there was relaxation. They, however, admitted a third creditable result, which they called prophylactic; but the pure methodists, such as Coelius Aurelianus, admitted neither specific disease nor specific remedies, and erased from their materia medica purgatives, diuretics, emmenagogues, nauseants, etc.

According to the methodist doctrine the study of medicine was so abridged that one of its prominent exponents said that he felt able to teach the whole of medical science in six months. It made rapid progress, and consequently was most attractive to the numerous young neophytes who were anxious to finish their apprenticeship and hasten into practice. It is not one of the smallest of the services which Galen rendered to his time and to posterity that he demolished the sophistry of the methodists, demonstrated the insufficiency of their practice, and brought to bear upon them the wittiest satire, calling them the asses of Thessaly, alluding thereby to their lack of literature and medical instruction.

In summing up, then, the basis for the various systems of medicine during this period of antiquity, it is seen that the most ancient doctrine of all, *Dogmatism*, directs our attention especially to the animal economy in health and disease, that it took account of the union of vital forces, of sympathies in the organism, and of nature's efforts to repel both internal and external deleterious influences, which providential tendency manifests itself especially in certain acute diseases. This was the strong side of dogmatism. Its weak side consisted in this, that it was held that the causes of diseases inhere in the access of certain qualities and humors along with organic forces, such as dryness or moisture in combination with bile or atrabile, and the treatment was directed against these supposed causes. It was on account of this weakness that the enemies of dogmatism attacked it. The empirics opposed the idea that inaccessible and occult causes of disease could become the basis for rational treatment. They affirmed that there was no consistent relation of antagonism or similitude between the disease and the remedies which cured it.

The *Methodists* somewhat improved on the doctrine of empiricism, but ran wild in its improvement and erected over their fundamental theory such a superstructure of secondary and tertiary generalities as to cause the fundamental part to be entirely obscured from sight.

There were not lacking, in those days of old, certain educated physicians who more or less vaguely comprehended that the entire

truth of medicine did not inhere in any one of these systems, but that there was good and evil in each. These men, not being able to establish general rules, tried to decide practical questions according to their fancy or their reason. They assumed the name of *Eclectics* or *Episynthetics*, meaning thereby that they adopted no exclusive system, but selected from each that which seemed to them best. They did not constitute a sect, because they had no precise dogmas nor theories, but they should not be confounded with the Pyrrhonians, who held to doubt as a fundamental doctrine; the true eclectic doubting only that which he could not understand. True eclecticism in medicine, however, is rather the absence of fixed principles, or, as Renouard says, it is "individualism erected into a dogma, which escapes refutation because it is deficient in principle." Many became eclectics to avoid discussing principles, and made of it a shelter. In one sense, then, an eclectic is one destitute of profound convictions, who sides with no particular party, is committed to no person or doctrine, and who is often so indifferent that he cannot judge with impartiality; consequently, to be truly eclectic is different from being an adherent of a school of eclecticism.

During the historic period just reviewed, anatomy and physiology made most progress, next internal and external nosography, and next to these medical and surgical therapeutics, and although Coelius Aurelianus and Aretæus have left to us by far the best books issued up to their times, nevertheless not one of the writers of this period has achieved the distinction in which Hippocrates is held, since he, perhaps more than any other, combined intelligence, sincerity, disinterestedness, love of his art, and humanity.

***

Under the classification of Renouard, already alluded to, the so-called *Age of Transition* includes the centuries commencing with the death of Galen, about A.D. 201, and ending with the revival of letters in Europe, about the year 1400. The first period of this transition age is the so-called Greek Period, which ends with the burning of the Alexandrian library, A.D. 640.

At the time when this historic period commenced, all the known world was under the dominance of a single man. The power of Septimus Severus had more extent than that of Alexander the Great, and bid fair to be of a much longer existence. The Roman dominion, cemented by seven hundred years of bold and persevering government, seemed almost immovable. While the savages upon its frontiers occasionally troubled its peace, none were strong enough to penetrate its centres or place it in real peril. The great civil wars had ceased, or changed their object. Both the people and the senate, those two eternal competitors, had gotten over the struggle for supreme power; monarchical government was accepted as a matter of fact, and the citizens contended only for choice of a master.

Similar changes had taken place in the domain of the mind; philosophical discussions, which were so essentially a part of the schools of the ancient Greeks, had nearly lost their interest and were being discontinued. Such disputes as took place related less to principle than to interpretation of the language of the teacher. In morals, Plato, Epicurus and Zeno were followed until the principles of Christianity gradually supplanted their teaching; in physics and metaphysics the authority of Aristotle, and in medicine that of Galen, were simply undisputed.

Conditions being such as these, there was naturally but one sect in medicine, and one method of study and practice. Medical science retrograded rather than progressed, sad to say, and was undisturbed by any remarkable revolution. The scepter of medicine passed from the hands of one nation to those of another, and the language of Hippocrates and Galen was later replaced, as will duly be seen, by that of Avicenna and Albucasis. But this Greek Period, which is one of transition, offers little for our consideration more than the lives and writings of four of its most eminent physicians, who by their study in the school of Alexandria, and by their writings and teachings, left reputations which were sustained until the invasion of the Arabs. Of these it may be said that, while they did little or nothing original, and simply commented upon the writings of Hippocrates and Galen, they kept burning the torch of medical learning which else had been almost extinguished by their indolent contemporaries. Of these

various commentators—for they were little more than that—the first of any importance after Galen was *Oribasius*, who was born in Pergamos (326–403); he early attached himself to the fortunes of Julian the Apostate, and followed him into Gaul when he was made its governor. Julian appreciated the good qualities of Oribasius, made him an intimate friend, and after he himself became emperor appointed his friend as quæstor at Constantinople. After the Emperor's untimely death, Oribasius remained faithful to his memory, but his jealous colleagues so falsely and so successfully misrepresented his fidelity that he was disgraced, spoiled of his office and property, and banished among a barbarous people. In this new field, however, he displayed such courage, effected such extraordinary cures, discoursed so eloquently, and so attached to himself the savage men around him, that he was by them regarded as a god. The fame of this homage in time reached the ears of the Emperors Valens and Valentinianus, who recalled him, reimbursed him for his losses, and permitted him to enjoy his high reputation and fortune to the end of his days. He was held to be the wisest man of his time, most skillful in medicine, and the most charming in conversation. He dedicated a collection of seventy books to Julian, his first patron, and edited at a later period an abridgment of this work for the benefit of his son. His principal merit consisted in reproducing the ideas of others with such clearness, order, and precision that the summaries that he gives of them are often preferable to the originals. What he has said of pregnant women, nursing, and the earliest education of the child, has been copied literally by writers for twelve centuries since his time. It must be said of him, however, that his prepossession in favor of Galen was so great that he adopted servilely his ideas and even his words, to such an extent that he has been surnamed "the ape of Galen."

Ætius was born in Mesopotamia in the year 502, and died in 575. He studied at Alexandria, and afterward went to Constantinople, where he became a chamberlain at court. Ætius was the first medical man of any note who professed Christianity, as is shown by such passages as this one: he said that in the composition of certain medicaments the following words should be repeated in a low voice: "May the God of Abraham, the God of Isaac, and the God of Jacob deign to bestow upon this medicament such and such virtues." In another place he recommends that to extract a bone from the throat the following words be pronounced: "Bone, as Christ caused Lazarus to come forth from the sepulchre, as Jonah came out of the whale's belly, come out of the throat, or go down." But he exhibits the same credulity in not doubting the miraculous virtues attributed by the quacks of his day to most remedies.

Like Oribasius he collected everything that he found remarkable in the writings of his predecessors, and has preserved certain fragments of antiquity which would otherwise have been lost. His work formed a complete manual of medicine and surgery, except that it lacked anatomical descriptions and references to dislocations and fractures.

Alexander of Tralles (525–605), a city of Lydia where Greek was spoken, was a son of the physician Stephen, and the most celebrated of five sons who were all distinguished for their learning. He traveled extensively and fixed his residence in Rome, where he became celebrated. He lived to an advanced age, and, being no longer able to practice, composed a treatise of twelve books, exclusively devoted to affections that did not require the aid of surgery. He professed the greatest veneration for Galen, but did not blindly adopt his opinions. He described the first reported case of excessive hunger and pain due to intestinal worms; he advised venesection in the foot rather than in the arm; but with all his sound judgment and mental enlightenment he had faith in amulets and talismans and widely recommended them. It may be said for him, such was the universal prejudice of his age, the whole world being plunged in superstition, that it was necessary for every one to pay some tribute to the prevailing belief; and we may add that it is necessary to make this excuse for some who practice much nearer to ourselves than did those ancient physicians.

Paul, or *Paulus*, surnamed *Ægineta* (because he was born in the Island of Ægina), was among the last of the Greek physicians who have special interest for us. It is

supposed that he died about A.D 690. He traveled extensively, and his skill in surgery and obstetrics rendered him celebrated even among the Arabs, whose midwives sent for him in consultation from great distances. He composed a compendium of medicine divided into seven books, and not only did not hesitate to borrow from his predecessors, but quoted from them most extensively; a number of his chapters were taken almost *verbatim* from Oribasius; however, he made no secret of it, but rather boasted that he had judiciously sought to appropriate the best of the writings of those he most revered. He showed originality, however, in the treatment of hydrocephalus, in advising paracentesis of the thorax and abdomen, in the extraction of calculi from the bladder, in the treatment of aneurysm, the excision of hypertrophied mammæ in men, etc. He was the first to describe varicose aneurysm, and the first to perform the operation of bronchotomy after the method borrowed from *Antyllus*, of which he has transmitted a very detailed account. Of this Antyllus, by the way, it may be added, *en passant*, that he was one of the most distinguished and original surgeons of antiquity. He flourished during the third century after Christ; was the first to describe the extraction of small cataracts; and is perhaps best known to the surgical world to-day by his exceedingly bold plan of opening aneurysms, so successfully imitated a generation or so ago by James Syme.

It has already been seen that before and during the early centuries of the Christian era the secrets and learning of the physicians tended to pass gradually into the hands of the priests. It was so in the temples of ancient Greece, it was so in Alexandria, it became so in Rome, it has been so even in modern times although only for brief periods of time. This has come about in some measure from the cupidity of the clerical orders, partly because it required a certain amount of intelligence and knowledge to become a priest, and partly because, owing to ignorance, credulity, and superstition, diseases have at all times been regarded by the ignorant as evidence of divine wrath and chastisement, or of diabolical or occult influences, rather than the effect of natural causes. Hence men have turned ever toward prayers, exorcism, and expiation, especially when exhorted thereto by the priests. This has been the sacerdotal aspect of the practice of medicine in all times, and when the priests have usurped therapeutic functions they have done harm rather than good. So long as theology and science work hand in hand, each redounds to the credit of the other, but always in the history of man when theology has appropriated that which did not belong to it it has brought ridicule upon itself and has delayed the progress of knowledge. There have been frequent rebellions against religious authority in ancient as in modern times. For instance, at the commencement of the fifth century before Christ the Pythagoreans were dispersed, and the doctrines of Cos and Cnidus, *i. e.* the Hippocratic teachings, were promulgated; and again in the course of events when the descendants of Æsculapius became servile attendants at the temples and adjuncts to the priesthood or a part of it. At first, in Alexandria, the physicians were supreme; their disciples, however, had the same blind reverence for authority that too many workers in the field of theology have evinced, and men once more practiced medicine on the traditions of the past, and in so doing allied themselves more and more to the temples.

In Rome, at first, the oldest and best instructed of the relatives treated the diseases of his family as he understood them; simply shared this duty with its other members. Cato the censor was much engrossed with this domestic medicine; he wrote a book in which he recommended cabbage as a sovereign remedy in many diseases. He venerated the number 3, as did the Pythagoreans; did not disdain to transmit to posterity certain medical words which it was believed should be repeated to assist in the reduction of dislocations and fractures. This old censor seemed to have a profound hatred for mdical men, and most absurd ideas of their works and claims, although doubtless many Greek physicians who came to Rome merited the invectives which he launched against them. Then came Asclepiades of Bythinia, as already mentioned, whose talents were far superior to those of his Roman contemporaries, and who did not need to call to his aid charlatanism and deceit. This medical hero unfortunately had many worthless and dishonest imitators,

who appealed to superstition and ignorance in every dishonest way, and who desired to be judged by the luxury and elegance they displayed. Hence for a long time in Rome, medicine was practiced without license. The Emperor Anthony the Pious was the first to occupy himself with regulating the practice of medicine. He granted certain immunities, but did not ask for proof of qualifications. A certain physician to Nero, Andromachus, was honored by the Emperor with the title of Archiater, *i. e.* royal healer, but Galen, who was physician to Marcus Aurelius, never bore it. From the time of Constantine the Great, however, the title is frequently met with in the edicts of the emperors. In fact there were two sorts of these—one named the Palatine, who belonged to the household of the reigning monarch and who held high rank among the nobility; and the other called the Popular Archiaters, who were public-health officers. No one could practice medicine in the jurisdiction of one of these without examination and authorization. Those who transgressed this regulation were punished with a fine of 2000 drachmas. The Popular Archiaters were pensioned by the city, enjoyed certain privileges, and had to attend the poor gratuitously. Practitioners who were not members of the College of Archiaters had no pay, no rights, no emoluments. The Popular Archiaters were elected by the citizens from many candidates who had proved their capacity before the college of this medical organization. The evils of medical anarchy were thus remedied; this happy condition existed until the empire was broken up by barbarism.

It is during this period, about 400 A.D., that we first find a class of citizens to whom was delegated the duty of preparing drugs ordered by physicians. Their duties were in some respects similar to those of our apothecaries, although in attainment and in social position they were far below the physicians. They were termed *pharmacopolists.*

It is worth while to stop a moment to inquire what were the medical charitable institutions of antiquity. Even in the days of ancient Athens there was a certain gymnasium called the Cynosarga in which abandoned and illegitimate children were brought up at public expense until such time as they were able to serve their country. A little later several private institutions of this kind were established. Rome in her earlier day never had such institutions; to be sure, she distributed provisions, or else remitted taxes, to parents who were unable to support their children, or even permitted them to destroy their new born children when unable to maintain them—but there were no bonds of sympathy which induced the patricians to succor the plebeians in time of disease and distress; slaves were cared for as were cattle. It is one of the debts we owe Christianity that under its influence the first almshouses and retreats were established in Rome. It has been said that the Emperor Marcus Aurelius first instituted anything like a dispensary service in the Sacred City. We are told also of an illustrious woman, Ste. Pauline, living in the midst of the greatest wealth and pomp, who retired from society and devoted her life to charity and self-denial. She went to Jerusalem, united with other Christian women of the same mission, and formed under the direction of St. Jerome a sisterhood whose members divided their time between reading sacred books and doing good works. They offered an asylum for the faithful, and an hospice for the benefit of the indigent sick; and even established a home for convalescents outside the city walls. After the model thus set, heathen emperors, Christian kings and Moslem caliphs showed their zeal in this good direction by the erection of sumptuous edifices and other rich endowments for the relief of suffering human beings.

Reviewing now the Greek Period, let it be remembered that in the times of Galen animals were dissected, and that he made anatomical demonstrations on monkeys; that sometimes the corpses of the enemy were rudely dissected upon the field of battle; but that finally the practice of dissection fell into disuse and human anatomy was studied only from books, the early Christians having evinced even more horror of the dead body for the purposes of anatomical study than did their pagan predecessors, while the Fathers of primitive times launched their anathemas against the dissection of human remains. Here again, as usual, the interference of the church worked only general

harm. This abandonment of anatomy contributed doubtless to the decadence of medicine; by the rapid extension of Christianity the pagan schools were disorganized and broken up, the profane sciences (such as medicine) were discarded, and the teachers still remaining in the old schools were ruined. Passion for religious controversy was engendered and took the place of study or original research, even to such an extent as to hasten the fall of the empire of the East. In addition to these factors, reverence for authority of the past, that terrribly oppressive weight which has kept down so much which would otherwise have risen early, and which has been the greatest enemy of human learning, permitted the explanation of natural phenomena to be sought only in the writings of revered ancients and not in living beings. No one dared to advocate changes in regard to received doctrines, and there could be no such thing as progress. Only two men in the lapse of four centuries showed any originality: these were Alexander of Tralles, and Paul of Ægina, whose lives have already been briefly rehearsed. It is with some relief, however, that we can think that this period, so unfruitful in scientific progress, was not so in social amelioration. By the organization of the institutions above alluded to, charlatanism was checked; by the requirement of capability and good character, society was benefited, and the charitable institutes of this epoch perhaps gave the world its best models in teaching and an insight into the most valuable means of medical instruction. Of the old Greek Period, then, we may say that it accrues rather to the benefit of humanity than to that of science.

(*To be continued.*)

ASTHMA.

BY DR. F. F. BELL.

This is one of the diathetical diseases; and this predisposition or diathesis must be established in the person before he can have asthma, either hereditary or acquired. The organic change which takes place to form this susceptibility is situated in the nerves concerned in respiration. Nature, as it were, either by disease or heredity, stamps her seal upon the asthmatic, and so fine is this impression that even the most powerful microscope cannot reveal it; also it is possible for this tendency to asthma to lie dormant, but it will always under favorable circumstances assume the active form.

In a patient attacked for the first time the paroxysms are generally preceded by certain premonitory symptoms, that vary greatly in each individual. These generally show themselves the night previous to the attack, though in some cases the interval will be longer: The patient will feel himself very drowsy and sleepy; unable to hold the head up or keep eyes open, and that without having undergone any particular fatigue, or any apparent reason therefor. In some will be manifested unusual mental activity and buoyancy of spirits; others exhibit loss of appetite, flatulence, costiveness, certain peculiar epigastric sensations, profuse diuresis, and neuralgic pains.

An asthma paroxysm generally occurs in the early morning — say from two to six o'clock,—though some cases first manifest themselves in the evening, perhaps just after getting into bed, before going to sleep; in some there is no particular time, but the onset of the paroxysm begins with an exciting cause, such as a fit of laughter, a full stomach, change of wind, etc. A patient may be free from the disease in the city and invariably suffer from an attack when in the country; breathing the air of a particular room may bring on an attack; odors, particularly of flowers and of hay, or emanations from animals, may at once cause an outbreak; or it may arise from fright, violent emotion, or uterine and ovarian troubles.

Dyspnœa is the most prominent symptom during paroxysm, and it is during its manifestation that the physician is usually called. Perhaps the patient has had but a few hours' sleep and been aroused with a distressing sense of want of breath, and a feeling of great oppression in the chest. Soon the respiratory efforts become violent, and the sufferer places elbows upon knees, raises shoulders, and straightens and stiffens his neck so as to form a *point d'appui* for the accessory muscles of respiration; and a few seconds or minutes develop a paroxysm of most intense dyspnœa.

Now the face is pale, its expression anxious; speech is impossible; and in spite of the most strenuous inspiratory efforts, very little air enters the lungs; expiration is prolonged and wheezy; the face becomes moist and the extremities cold.

Now what has caused this terrible seizure? The pneumogastric nerve, which supplies the muscles of the smaller bronchi, and in health causes the respiratory centre to send just enough nerve force to them to keep up that beautiful rhythmical wave action of these muscles, sees fit to tonically spasm them through the same centre, some in this lobe and some in another; nor does even the diaphragm escape, but shares the same fate as the smaller muscles of the bronchioles. This nerve is forced to act in this manner through a hundred different channels, some of which I will now take notice of.—It is very easy to see how an acute attack of bronchitis can cause asthma, and indeed it does so so often that we lose sight of it in this sense and place it in our nomenclature of diseases as bronchitic asthma.

The bronchial mucous membrane in acute bronchitis becomes swollen, and squeezes and irritates the sensitive nerve-endings of the vagus, and this irritation is carried to the respiratory centre, causing a tonic spasm of the smaller muscles of the bronchi—and this mucous membrane can be so sensitive that in the case of the late Doctor Flint, of New York, not one feather could be tolerated in the same room. A diseased kidney, by not performing its function, thus leaving in the circulation certain deleterious compounds which produce an acute bronchitis, is often indirectly the cause of asthma.

A lady living in a malarial district was attacked with asthma very frequently. She would complain first of pain in the back and of scanty and very high-colored urine, which, if no treatment was pursued, would become bloody—and when this stage was reached the bronchitis would commence and the asthma follow.

Hypertrophic rhinitis and other diseases of the nasal cavity will produce asthma, and to this organ might be added the stomach, intestines, genital organs, and last, but not least, the heart. We sometimes cannot locate the exciting cause, and then it is very frequently a syphilitic gummata situated in the brain and thus acting centrally on the respiratory centre.

And so the treatment of asthma must vary according to the exciting cause, which must, before prescribing for the patient, be carefully looked for.

The indications for treatment in asthma are: To relieve the paroxysm—because it is at about this stage of the disease that the physician is called in—by causing the patient to inhale the fumes of bibulous paper soaked in an extract of stramonium seeds, belladonna leaves, nitre, and then dried. Lobelia, cocaine, the bromides, caffeine, morphine, apomorphine, atropine, chloral, Hoffman's anodyne, spirits—any of these, or a combination of them, will break up a paroxysm. During the intervals counter-irritation over the cervical region will be found beneficial. The remedies most highly recommended to prevent and relieve the disease are: The arseniates; strychnine; quinine; brucine; grindelia robusta; the iodides; electricity and the faradic current; and finally, I may add, a deal of benefit can be had by taking exercise and baths regularly, and—in the winter—wearing flannels. Also the diet should be carefully looked after. I will cite the treatment of one case of asthma in which the patient also had dilatation of the right cavities of the heart. I tried nitre-paper fumes in vain, but he was immediately relieved by an injection of $\frac{1}{100}$ grain of atropine.—I gave the atropine to paralyze the inhibitory action of the terminal fibres of the vagus and to stimulate the cardiac ganglia of the sympathetic; and the action of the heart was immediately improved, the spasm of the bronchioles relieved, and the patient breathed freely. I then put him upon the following: a capsule containing two grains lactophenin, one grain quinine, three grains muriate of ammonia, one-eighth grain capsicum, $\frac{1}{24}$ grain strychnine—four times daily. Also: potassium iodide, ninety grains; Fowler's solution, sixty minims; Hoffman's anodyne, two and one-half ounces; tincture belladonna, two drachms; syrup bitter orange to make six ounces—two teaspoonfuls in water an hour after meals.

Windsor, Ontario.

A FORMIDABLE TASK.

At So Fadd Street, climb the stair
And give the knob a twist,
And presto! there sits Doctor Naire,
Bacteriologist.

There flourish beetles stuck with pins,
And maps of nerves and bones;
The spider spins her web where grins
The skull of Mister Jones;

The walls are hung with microscop-
ic pterodactyls dire,
Enlarged (in colors); and the mop
Hangs by the great grate fire.

There is no carpet on the floor;
No stove; no piped hot air;
Oxygen and sapolio
Are good enough for Naire.

The jars you see upon the shelf
Contain not only soup,
But scarlet fever, rheumatism,
Tubercles and croup.

A thousand-dollar microscope,
And small ones for a cent
The anchor of the Doctor's hope,
His tables ornament.

The doctor—Doctor Naire! Behold
The bald spot on his head!
I see! And yet he is not old.—
Why is his plumage shed?

His germicide it worked too well;
It was not meant for hair,
But for the parasites that dwell
Occasionally there.

The means by which, as we all know,
Plebeian mothers hope
To banish these, were quite below
His scientific scope.

He is not jolly, round, and fat—
I think because he tries
His food and drink and shoes and hat
Always to sterilize!

It sterilizes him, poor thing!
Yet if you've tears to spare,
Reserve them for the wife that clings
To dismal Doctor Naire.

Always he sprays her mouth, he tells,
Kisses, then sprays, and then
Gargles his throat with stuff that smells
To heaven and back again.

Has mixtures for his whiskers, eyes,
Face, arms, legs, feet, and hands:
Intended to antagonize
The perspiration glands.

He finds bacteria in the air;
In liquids great and small;
Millions and trillions everywhere,
In summer, spring, and fall;
And this right valiant Doctor Naire
Is bound to kill them all!

W. A. T.

Detroit, January, 1895.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of the MEDICAL AGE.

DIAGNOSIS AND SELF-MEDICATION.

Self-medication is legitimate when the patient is thoroughly aware of what ails him and of the physiological effect of the remedy he applies. What a layman *knows* is as authoritative to him as is the opinion of the most competent physician. If gastric and cardiac distress follow the ingestion of cabbages and rutabagas, with sufficient uniformity to demonstrate the presence of a causal relation, the first impulse of common sense is better than artificial digestants and heart tonics. When headache follows close confinement, how much better it is to get fresh air than to take antipyrin or phenacetin or any other nerve depressant! Yet the physician, seeing the symptoms but not the cause, may easily stumble into the error of prescribing to remove the former instead of the latter. There are cases where nobody knows, or is likely to know, so well as the patient, what the irregularities are which underlie his *malaise;* in such an event nobody is so competent to prescribe as he himself—provided he has the good sense to know that Nature will stand no trifling, but executes her laws without respect of persons and without mercy. If irregularities, then—over-eating, over-working, over-anxiety, indulgences of any kind, lack of exercise, lack of air, lack of good food—are known to exist, what more efficient advice could the most learned physician give than that the irregularities be dismissed or escaped from, and recovery confidently expected, physic being thrown to the dogs? Ignorance as to these causes of disease puts the medical man in a peculiarly unfortunate position; for while he may be able to prescribe a remedy that will give temporary relief, he cannot possibly effect a cure unless he knows what is to be cured—which is not headache, "heartburn," "nervousness," etc., but bad habits.

These exceptions aside, however, the patient who "doctors" himself—and his name is Legion—forgets one point of prime importance: unless he knows enough of physiology and pathology to perceive the true significance of his symptoms, it is simply absurd for him to employ drugs or combinations of drugs suggested by desultory reading or by stationary or peripatetic quacks. He is more likely to hit a sound organ than a diseased one. Or if he relieves temporarily, he is almost certain to aggravate permanently.

He is shooting in the dark; and his knowledge of the nature of the ammunition even—if he should happen to have any such knowledge—is of absolutely no service, inasmuch as he cannot see the mark he is aiming at.

The literature of therapeutics is more or less open to public inspection—from massage to the synthetic remedies, from balneology to antitoxin. Not only are medical books and medical journals accessible to all who desire to reach them, but those who do not care to take that trouble have the healing art popularized for them in the weekly newspapers. But in the absence of diagnostic skill, what boots it to know therapeutics? Bronchitis, pleuritis, gastritis, enteritis, nephritis, may each be curable, and the layman may possibly know the name of the curative agent; but unless he knows what ails him, of what avail is his other knowledge?

It is precisely because of the intricacies and obscurities of physiology and disease-processes that doctors will never go out of fashion, in spite of all the "doctor books" that can be printed from now to the end of the world; for by the time the layman becomes a reliable diagnostician he will be about ready to take professional honors.

Diagnosis is the physician's forte. It is not all of medicine by any means, but it is that element which guarantees the permanent importance of the medical profession. More or less of therapeutics may be "picked up," but diagnosis has to be drilled into the student by persevering study and by varied clinical experience.

And yet there are too many people who, if questioned, could not possibly tell how many pathological conditions a pain in the side may imply—who do not know whether in any particular case dizziness arises from the stomach, the heart, or the brain—who, aware that they are "constipated," remain utterly in the dark as to whether this condition is a cause or an effect—but who nevertheless do not hesitate to diagnose their trouble in accordance with the trash that is set before them in the advertising columns of the daily press, and make haste to publish the effects of powerful stimulants or gentle narcotics on a debilitated body and irritable imagination as a "wonderful cure" of a case "given up by the physicians." Perhaps it is a morbid sentiment, but it is extremely common—this craving for immediate and astonishing results rather than for the snail-paced recoveries which patient Nature and more patient art achieve. Common sense goes a long way in taking the place of technical skill, but its usefulness has a limit; how inconceivably more limited must be the usefulness of that sciolism which swallows unknown medicaments for the cure of unknown diseases!

Some physicians imagine that by continuing to write prescriptions that are incomprehensible to the laity, they prevent the extension of amateur self-medication. But with the development of reason among the multitude, the physician need have no fear of making known in plain and legible English the names of the remedies he employs. The protection afforded by bad Latin is at best a questionable one, as it often leads the patient to class the mystery of the prescription in the same category as the mystery of the patent medicine—he knows as much about one as he does about the other; whereas the perfect frankness which the true physician can afford is in no danger of encouraging self-medication if along with the frankness goes a word of counsel to the effect that therapeutics without diagnosis is irrational and dangerous.

The predestined growth of human intelligence will never allow the diagnostician to become extinct so long as human beings are liable to disease.

W. A. T.

Detroit, Michigan.

TREATING CANKER RASH.

Editor MEDICAL AGE:

On the western border of Lake Champlain, in the State of New York, about a third of a century ago there lived an uncultured man of mature years who, without any special qualifications for the treatment of disease, became quite an adept in the management of cases of canker rash, as scarlet fever was then called, and his fame in that line was so widely spread among the people of his county that his services were in great demand whenever an epidemic of that dread disease made its appearance.

But, in process of time, as it often happens, even when unlooked for, the "grim messenger" called for *him*, and he who had often saved the lives of others failed to save his own.

Soon the people where he was best known, feeling that in his death they had lost a real friend and helper in times of sickness, began to look about them if perchance they might find someone upon whose shoulders the healing mantle had fallen.

But not long had they to wait, for soon a female, a woman of family, claimed the right of succession in the healing art.

Without culture, and having no knowledge of the treatment of disease other than what might be gleaned from a copy of the "People's Almanac," she started out with the boldness of an experienced professional, and soon

calls for her services came from near and from far.

The regular profession was "nowhere" when she could be had. But when death began to gather in its embrace the majority of her patients just as she was about to cure them, she took shelter under the plea that the type of the disease had changed materially since she began to practice, but she would soon have the mastery of its new form and then all would get well.

In the midst of her work, while caring for an obstinate case that refused to improve on frequently repeated doses of castor oil and Phinney's pills, to the physician who was called in to take this case from her hands, in boasting of her wonderful skill she said among other things: "Why, only a few days ago I was called to see a boy who was awfully sick with erysipelas, canker rash, and scarlet fever, and as the erysipelas seemed to be troubling him the most I attended to that first and had it cured in less than half an hour by wrapping him in a sheet wet with cold saltpetre water, and if he had only lived a little longer I would have cured both of the other diseases."

It is needless to add that from that time on, the calls for her professional services, in that region, failed to materialize as they had formerly done.

Moral.—"If ignorance is bliss (money), 'tis folly to be wise."

F. B. NICHOLS.

Plattsburgh, N. Y., November, 1894.

PUERPERAL ECLAMPSIA—VERATRUM VIRIDE.

Editor MEDICAL AGE:

On May 12th, 1893, I was called in consultation to a case of eclampsia. The patient was a primipara, robust and strong, but in bad condition—obstinately constipated, for relief of which condition no measures had been taken. Had been seized with severe headache earlier in the day, that rapidly became intensified, culminating in vomiting and convulsions. The attending physician up to the time of my arrival had bled her twice from the arm, administered hypodermatics of morphine, inhalations of chloroform, and an enema of thirty grains of chloral hydrate.

We now gave a copious enema of hot water, repeating in an hour or so—both were retained, though why, I do not know; also dropped croton oil on tongue. She was unconscious, but labor set in, the pains being strong and regular, and when the head was low, delivery was effected by forceps.

Two days later I saw the patient again—temperature 104°; pulse wavering and unsteady; tympanites; mind affected. Antiseptic douches had been employed twice daily since confinement, and now washing-out of uterus was suggested and carried out; but she only lived a few days.

I asked my colleague in this case to give me a memorandum of the treatment employed, for publication, which he failed to do; therefore I am obliged to rely upon memory solely in reporting this case. The convulsions ceased spontaneously, apparently in no way modified or controlled by the treatment instituted. At this time I had no knowledge of the use of veratrum in eclampsia, else it would have been tried.

In September last I was called to another case, also a primipara, that had been in labor all night. Attempted to deliver with forceps, but convulsions supervened with the introduction of one blade, and I was compelled to complete the parturition by craniotomy. The next day Doctor Bowman saw the case with me; and again on the fourth day, as the convulsions still persisted. On the second occasion he remained in charge all night, and I suggested he employ Norwood's tincture of veratrum hypodermatically in thirty- or forty-minim doses—if he failed to control the spasms otherwise. In the morning he informed me he had given twelve minims of the veratrum, and "was glad the dose was no larger." This, however, put an end to the convulsions, and the patient made a good recovery, though she required medical attention for more than a fortnight.

C. H. DONNELLY.

Utopia, Texas,

ERYSIPELAS.

Editor MEDICAL AGE:

Erysipelas is a disease we so frequently encounter, and sometimes proves so troublesome, to say nothing of its occasionally fatal termination, that anything offering advantages over usual lines of treatment will, I presume, be welcome.

I shall say nothing regarding ætiology or diagnosis, but simply draw attention to my experience with a very common drug.

Boric acid gives the best results of anything I have ever used. My method is to make a poultice of linseed meal, embodying therein a solution (one drachm to the ounce) of pure boric acid in soft water; this poultice is large enough to completely cover the area of inflammation. Of course there are times when this method is not practicable, on account of

the seat of disease; yet even in facial erysipelas it can frequently be used to good advantage. But in cases where it cannot, a very superior ointment can be made by mixing boric acid with vaselin in the proportion of thirty grains to the ounce. The poultice, however, is preferable.

I have had some very severe cases, and I never employed any measure, in any disease, with more signal benefit. It seems to have more than a purely local effect. No doubt some of the drug is absorbed, and the systemic action may have been beneficial.

Boric acid has been used internally in erysipelas—as well as in many other septic diseases—with asserted benefit, though I have never so employed it, consequently cannot speak thereof.

This method of treating this disease is certainly preferable to hypodermatic injections, and more agreeable to the patient.

I may add the boric-linseed poultice is very useful in many other troubles, as it is thoroughly antiseptic and likewise acts as an efficient astringent.

GEORGE H. GOODGER.

Davisburgh, Mich.

THE INVERTED RETINAL IMAGE.

Editor MEDICAL AGE:

Allow me to reply to criticism appearing in your journal of December 10th on my article in AGE of April 25th, "The Inverted Retinal Image."

The reference to the Shawnee boy's optic nerves Doctor Spence characterizes as a "physiological crudity;" and yet it is apparent the suggestion I made may be true. If a photographer takes a negative, it shows left to right, but when the photograph is printed from the negative it is right to right and left to left. If a negative be taken from the photograph it will be reversed, but the picture printed from the second negative will show correct again—and so on *ad infinitum*. So it is in the case of the Shawnee boy.

That there is a twist in the optic nerve, is a fact. In Diseases of the Eye, page 593, Noyes, in speaking of the nerve, says it is slightly twisted. According to the laws of physics a half turn or twist would bring the bottom fibres on top and take the top fibres to the bottom and certainly erect the "inverted retinal image" upon the brain, which is the matter of chief concern to me, for the explanation of which I am claiming credit.

Very respectfully,

G. A. HARMAN, M.D.

Lancaster, Ohio.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., JANUARY 25th, 1895.

Editorial.

DEATH OF DOCTOR B. W. PALMER.

It is with great sorrow we announce the death of this estimable gentleman, well known for his connection with the MEDICAL AGE, of which he was editor from February, 1889, to August, 1893. In the middle of the latter year Doctor Palmer gave evidence of failing health, and finally felt compelled to resign the editorial chair, since which time—up to his demise January 4th last, at Nyack-on-the-Hudson—he was for the most part confined to the house. He leaves a widow and two sons. Doctor Palmer was one of the most genial and warm-hearted of men, which secured him a wide circle of friends and acquaintances.

ANTITOXIN.

A correspondent queries why THE MEDICAL AGE is opposed to antitoxin in diphtheria.

As a matter of fact THE MEDICAL AGE is not opposed to antitoxin or the serum treatment, or any other *bona fide* therapeutic measure. Any objections that have been raised are not against the preparation *per se*, but deprecatory of the premature exploiting of this or any other remedy before it has been sufficiently studied for its value to be determined with some degree of definiteness.

* *
*

Everywhere the experiments during the past fortnight appear to have been satisfactory, and the statistics as published go to evidence further decrease of mortality—from

the former average of twenty-four or twenty-five per cent. it appears to have fallen to between twelve and fourteen per cent.

Katz reports 163 cases, with a death-rate of thirteen per cent.; and twenty cases treated in the Willard Parker Hospital, New York, give a death-rate of twenty per cent. The reports from Paris continue to show a *reduced* mortality of fifty per cent. In London good results have been obtained in St. Bartholomew's Hospital in cases not too far advanced; but unfortunately, if we may accept the utterances of the *British Medical Journal*, all investigations in Great Britain are being conducted with secrecy. In Buda-Pesth, Professor Bokai reports a mortality of but fourteen per cent. without intubation. The War Department has authorized the antitoxin treatment in the French army, while serotherapeutic services have been organized in Brussels, Milan, Piacenza, Turin, Madrid, Lisbon, Lille, and Havre. Finally, official reports in regard to the use of antitoxin in the districts of Trieste and Czernowitz show a large decrease in the mortality from diphtheria—these reports advise that the remedy be administered at the earliest possible moment.

At a recent session of the Clinical Society of London, opportunity was afforded several observers to relate their experiences with the serum, and, although the total number of cases reported was small, the consensus of opinion was that the efficacy of the remedy seemed to be assured, though the question of efficacy is linked with that of the period of the disease at which the treatment is instituted. Doctor MacCombie believes the treatment, if commenced on the second or third day, will usually prevent the spread of membrane, and sometimes too after three or four days of illness. Doctor Eastes concludes that every case having no laryngeal symptoms will recover if treated within two days of onset. Doctor Goodall declared that of thirty-two cases treated by him within three days of onset, only two died, whilst in twenty-nine admitted between the fourth and fourteenth day, eleven died; and that this is the real test of the efficacy of the treatment, since it is in accordance with the known nature of diphtheria and its toxins. Others expressed a doubt whether, on the lines of treatment, local and general, hitherto adopted in diphtheria, there can be found any very marked difference in result between cases treated from the onset and those in which there has been delay; in many of the cases that received serum injections there was no suspicion of local treatment.

Several other suggestive points were brought out during the discussion, notably the possibility of isolating the antitoxin and administering it apart from the serum, as foretold by Doctor Newman—Doctor Woodhead, however, doubted whether a substance of so unstable constitution could be thus separated without suffering change in the process.

Doctor Goodall, from personal experience, confuted the claim that the serum may cause suppression of urine; such a condition, when present, being due to the disease itself.

It is impossible to compare the results reported in an altogether satisfactory way, since the series of cases is not sufficiently large or full; yet, allowing full force to the figures adduced by the Clinical Society as to the fluctuating fatality of diphtheria in time-periods, the general outcome is distinctly in favor of the serum and of continued trial thereof.

INTESTINAL SUPERDIGESTION.

Doctor W. S. Christopher, Professor of Diseases of Children in the College of Physicians and Surgeons, and the Polyclinic, Chicago, has for years devoted especial attention to maladies that arise from defective digestion and malnutrition, more particularly those generally classified as bilious or "forms of biliousness," and as a result draws some very interesting conclusions.

He frequently found food-stuffs undergoing in the intestine a putrefactive process that constitutes a continuance of the decomposition processes set up in the albuminoid molecule by the digestive ferments proper; in other words, a pathological fermentation induced in, or superimposed upon, the products of normal digestion, by microorganisms varying according to the food ingested. This process Doctor Christopher is pleased to term superdigestion, though the term seems not altogether applicable.

To the superdigestion of proteids he ascribes certain forms of ptomaine poisoning or intoxication resulting in a group of symptoms defined by constipation, headache, drowsiness, listlessness, or even marked depression of spirits—in other words, the usual evidences of so-called "biliousness;" a condition that, as modified by infancy, is too often accompanied by contracted pupils, slow and shallow respiration, and depressed heart action, possibly culminating in irritation of the nerve centres, inducing convulsions. It is by no means uncommon to find young children suffering with high temperature that has suddenly and mysteriously supervened, accompanied—or more often perhaps preceded—by convulsions that may be permanently relieved by clearing out the bowel and administering intestinal antiseptics; this symptom group should be accepted as *prima facie* evidence of ptomaine intoxication. Such intoxication, too, may develop a fever of low type closely resembling typhoid, which, however, culminates for better or worse on the second, third, or fourth day. In ptomaine intoxication Doctor Christopher believes we will find a common and potent source of urticaria and eruptions of erythematous character.

When there is superdigestion of fats, the fatty acids are broken up to the production of hydrogen and carbon-dioxide—such is more especially likely to supervene upon an albuminous diet, and occurs most frequently in connection with gaseous fermentation of carbohydrates—and a condition is induced that constitutes the most painful of the various maladies generally denominated "dyspepsia" The craving for albuminoids by such patients is often so great that nothing but the tortures of the malady will prevent their ingestion; and here the ordinary digestants, and notably the pancreatic ferments, merely add fuel to the flame, as it were, and cause additional suffering. Indeed, the only ferment which is efficient in this connection is malt diastase, by means of which it is possible to digest the starch that forms in the stomach, the greater portion being thus absorbed in the organ itself or in the duodenum, and little or none permitted to reach the lower intestines.

Carbohydrate superdigestion is a very common occurrence, but it has of late been repeatedly shown that it yields promptly to good diastase—that the diastasic ferment quickly arrests the most severe case, even when starchy foods are permitted in limited quantities. This form of "dyspepsia," however, is particularly apt to recur.

"THE STILL SMALL VOICE."

Under this caption the *Washington Post* in good faith indulges in a most extraordinary pathological dissertation upon the seat of the conscience. It is so rich we reproduce it *in toto:*

The conscience, that still small voice, has always been of more interest to metaphysicians than to surgeons. Its existence was recognized by the earliest philosophers, but even the most advanced materialists of modern times have not attempted to locate its habitation in the human organism. That it is a part of man's make-up has in fact been a stumbling-block to the iconoclastic scientists of our day. Between materialism and accepted truth the conscience stood alone as a barrier.

Now, however, this obstacle has been removed and the materialist stands for the moment triumphant. He has discovered that the conscience, like the memory, is simply a combination of tissues. No greater victory was ever won by the surgeon's knife. The way of it was this:

A noted manipulator of the scalpel began years ago to make a close study of the vermiform appendage, that seemingly useless portion of our anatomy known as "the blind intestine." Here was a sac that seemed ordained by nature for nothing but destruction. If, in the course of the digestive process, a seed or other hard substance left the beaten track and dropped into the "blind intestine," the victim of such a mishap was doomed to death. Neither medicine nor surgery could save him. Science asserted that this fatal sac was wholly useless and simply a menace to human life. "Our hero," a surgeon whose name is world-renowned, determined to solve this ancient mystery. He devoted years to the task, and finally invented a method whereby the unlucky wight who had dared the inflammatory wrath of the blind intestine might be saved His process consisted in the skillful manipulation of the knife and the excision of the offending sac. Many an unhappy sufferer owes his life to this brilliant triumph of surgical ingenuity.

After a time the surgeon who had achieved this great victory became impressed by a certain suggestive fact. He had made a practice of following his patients in their respective careers after they had recovered from the effects of his nimble knife. To his surprise he found that the removal of the vermiform appendage had a marked influence upon

the moral nature of the man who had undergone the operation. After repeated experiments he came to the conclusion that the seat of the conscience lay in the blind sac.

Such a startling deduction was, of course, not to be accepted without convincing proof. Our surgeon, therefore, confided his theory to several colleagues, and together they made a close study of the phenomena presented. One of their first steps was to cut open the body of a murderer, a man who had displayed in his life and death a remarkable lack of conscience. To their astonishment they found that the intestines were wholly devoid of a vermiform appendage.

Of course, they reasoned, this may have been a coincidence. Our surgeon smiled and assured them that his theory was correct. Some weeks later the committee cut open the body of a man who had lost his life through an utter indifference to the distinctions between right and wrong. Again the surgeons failed to find the blind sac.

There was enough in all this to arouse the curiosity of those who had taken part in the autopsies. One of them, a practitioner who was noted for his conscientiousness, agreed to have his vermiform appendage removed in order to prove conclusively the truth or falsity of the proposition under discussion. He endured the operation with heroic calmness, and made a quick recovery. A few weeks later he murdered his mother in-law in cold blood.

There is no longer a shadow of doubt that the seat of the conscience is in the vermiform appendage.

Great is the lay press in medical science!

ANOTHER NEW IDEA.

We have before in these columns had occasion to refer to pernicious attempts to force Kola upon both the medical profession and the laity as a panacea. The latest effort in this direction appears in the form of a pamphlet with highly artistic cover—indeed, the cover is the main part of the pamphlet, and cannot fail to convince the most skeptical practitioner. In the background appears a yellow tree of unknown species resting in a green prairie bordered by a white river, the further side of which is bounded by *green* rocks. At the roots of the anomalous arboraceous growth appear two pink savages clothed exclusively in white shields and spears with blades two feet long. A green snake in the tree, and a pair of blue elephants at the riverside, give evidence that "Kola is nature's specific for the cure of asthma." Along with this wonderful book, which is filled to repletion with certificates made to order, and most horrible wood-cuts copied from a bastard plagiarized edition of Stanley's work, goes a circular bearing a letterhead impress of green negroes with white diapers plucking Kola nuts from plants eighteen inches high on the border of a lagoon which is about to afford passage for a Mississippi River steamboat. The literature of this circular assures us that the particular compound of Kola is a "positive constitutional cure for asthma;" and it answers the query how much will be required, by the statement that only three bottles of this wonderful nostrum at $3.00 per bottle will guarantee a cure. The title of the stuff is not Kola, but taken from the mountains of Northern India, though it is claimed Kola is the chief constituent.

What a boon it is to know that such a very "reliable company" as that which put forth this elegant literature, will "positively guarantee a cure!" It makes no difference as to the precise cause of the asthma, since three bottles—we should say nine dollars—"cures by acting gradually on the blood and constitution." Great is charlatanry.

A SHAME.

The medical profession is constantly on the *qui vive* in its attempts to combat quackery; but what shall be said when journals purporting to be devoted to medical science boldly uphold and foster this evil? Only recently a Southern medical periodical devoted its chief editorial to puffing proprietary remedies, evidently with a view to exploiting the same in its advertising columns. It declares that "all the resources of art and science have been contributed to the manufacture" of such, and that therefore they must be "much better than the prescriptions *hastily and crudely compounded* at the drug stores;" that "everybody knows the profits made from the sale of drugs far exceed those obtained from the sale of proprietary medicines, but the profit gained in the first place is at the expense of the patient, and in the second at the expense of the druggist;" and again, that in prescribing such remedies "we always get the purest qualities of the drug compounded with the greatest skill."

This is "stealing the livery of heaven to serve the devil in," with a vengeance.

THE ANTI-VACCINATIONISTS.

This particular group of faddists are becoming very much alive of late, and flooding the universe with their literature. The latest crime attributed to vaccination is that it induces decay of the teeth. The argument runs thus: As savages appear to have sound grinders, and all civilized people the opposite, the latter must owe this peculiar condition to the fact that they indulge in vaccination.

Great is the discovery!

Further, for outrageous, bald-faced impudence, commend us to the tracts of the London Society for the Abolition of Compulsory Vaccination, which deal with data that are not alone absolutely and scandalously false and misleading, but "manufactured from whole cloth!"

EDITORIAL NOTES.

Fraudulent Antitoxin.—

Already have been put on the market one or more fraudulent antitoxins for the cure of diphtheria. The German preparations that have found their way to this country here and there are the *only* ones known to be reliable and guaranteed. Inasmuch as the time necessary to growing the first crop of antitoxin cannot be less than six months, it will be readily seen that such rapidly matured plants must be throwing off an immature and worthless article.—*Journal of the American Medical Association.*

The foregoing is corroborated by the *Medical Record.*

The Boards of Health of New York City and Brooklyn, and likewise Messrs. Parke, Davis & Co., have taken up the work of producing antitoxin, but their stocks cannot become available to the public for four or five months to come. Under the circumstances it behooves every medical man to scrutinize the product offered, and likewise to know the length of time that has elapsed between the establishment of the plant and the marketing of the antitoxin.

The Dangers of Bread and Butter.—

Under the above caption the *Medical Record* recently listed all the dangers that accrue to the use of this homely but nourishing diet as follows:

Bacillus subtilis, variety 1 (hay bacillus); bacillus subtilis, variety 2 (hay bacillus); bacillus subtilis, variety 3 (hay bacillus); sarcina (*a*), large; sarcina (*b*), smaller than *a;* bacillus A (large, thick, rounded ends); bacillus B (large, thick, smaller than A); bacillus C (small, copious spore formation); bacillus D (smaller, still some spore formation); bacillus E (bacillus figurans); micrococcus A (small white colonies); micrococcus B (rosaceus ?), accidental; staphylococcus (very regular, larger than staphylococcus aureus).

To this the *Homœopathic Recorder* suggests that if we are to be deprived of food at this rate we shall soon be forced to live on canvasback duck, no flies having been discovered on that member of the Anatidæ up to date.

The Detroit Medical and Library Association.—

At the last session of this Society—January 14th—it was resolved to invite Doctor Karl Schwickerath, a physiological chemist in the employ of Messrs. Parke, Davis & Co., to lecture before the Association in the near future upon toxins, antitoxins, and serum treatment, illustrating the same by practical demonstrations; also that the other local medical societies be invited to attend.

This resolution was brought out by the fact that the subject just now is of great interest, and the lecture would adduce practical information regarding chemical processes that are not generally available in medical literature.

Literary Elegance.—

In a recent number of a Texas journal appears an article with the astounding title:

"The Amazing Infatuation of the Texas State Medical Association in Pompously Parading its Appalling Ignorance of the First Principles of Sanitary Legislation; and its Unbounded Cheek and Unmitigated Gall in Presuming to Instruct Congress in the Proper Performance of its Duties—Succinctly Set Forth."

Two Sides of the Question.—

The *New Albany Medical Herald* recently asserted that: The graduate of 1854 is a·

perfect ignoramus in comparison to the graduate of our modern schools.

This provokes many a smile, and may recall the old aphorism regarding the medical graduate, that he requires five years of practice to discover he is an ass.

Poisoning by Aloes.—

Doctor F. G. Connor, of Lismore, New South Wales, reports the death of a woman aged twenty-eight from a quarter of an ounce of "Hiera-picra." The entire amount of the drug was added to a pint of gin, of which the woman took a tablespoonful twice a day for a fortnight with a view of producing abortion.

Death of Doctor George W. Topping.—

Doctor Topping, a former President of the Michigan State Medical Society, and a well known figure at all medical gatherings in the State, died suddenly at his home in De Witt, Michigan, January 14th. Few men stood higher in the profession or were more generally loved and respected.

Death from Chickenpox.—

Doctor W. B. Nisbit, of Townsville, Queens land, reports a fatality in an infant eight and a half months old, from chickenpox. This is somewhat remarkable, since the malady is universally deemed objectionable and teasing rather than fatal in character.

A Journalistic Change.—

The Practitioner (London) has changed editor and publisher. It is now under the management of Doctor Malcolm Morris instead of T. Lauder Brunton, and published by Cassell & Co. instead of the Macmillans.

Deficient Mammary Development.—

Physicians prescribing for prospective mothers in whom mammary development is deficient, will get more satisfaction from Saw Palmetto than from any other drug or combination of drugs.

Good!—

The sale of patent medicines in England has fallen off 4,000,000 parcels from 1893. Wish we could say as much of the United States.

Items and News.

Some Epitaphs.—

At St. Paul's, Bedford, Mass., there is an epitaph on a tombstone that reads:

Patience, wife of Shadrach Johnson.
The mother of 24 children, and died in
child-bed, June 6, 1717, aged 38 years.
Shadrach! Shadrach!
The Lord granted unto thee
Patience,
Who laboured long and *patiently*
In her lowly vocation;
But her *patience* being exhausted,
She departed in the midst of her labour
Ætat. 38.
May she rest from her labours.

On the tombstone of an infant three months old:

Since I am so quickly done for
I wonder what I was begun for—

A tombstone in Burlington, Iowa, has this stanza:

Beneath this stone our baby lays,
He neither cries nor hollers;
He lived just one and twenty days
And cost us forty dollars.

—*North Carolina Medical Journal.*

In a Nutshell.—

The formula of the nostrum, as published to the medical profession, exhibits the art of "how not to do it" brought near perfection.

We are reminded of this by the receipt of a box labeled "Sample. ——ine. (Modified Formula of Sir Astley Cooper.) FORMULA: Alum, with the irritating properties of the drug eliminated, with Carbolic Acid and Ichthyol added. For directions see circular."

The idea of an ingredient so modified that its action is different from the ordinary action of the drug is a favorite one with the compounders of secret nostrums; and the use of some great name to give a show of respectability is also an old trick; but the happy combination of alum modified so as to be free of its irritant properties, and Sir Astley Cooper's formula, with two ingredients added, either of which is far more active than the original preparation, is as bold as it is original.—*Polyclinic.*

A Lesson Taught.—

The story goes that not long ago the people of one of the West India Islands introduced the mongoose (or ichneumon) to clear out the rats and other "small deer" that infested their homes. The mongoose went to work and multiplied until the rat supply would no longer support them. They

cleaned out the rats, snakes, birds, and fowl, and at last account were beginning on the young of larger animals; and the people of that island sigh for the good old days when rats swarmed and the mongoose was unknown, for as the birds disappeared insects increased until now they are a plague—a plague of insects and a plague of mongoose. There are to-day a number of medical ichneumons that the cautious man should handle with extreme care, such as antitoxin, hydrophobia virus, consumption lymph, cholera extract, etc.—*Homœopathic Recorder.*

And Why?

The New York City Board of Health has adopted the following resolutions:

"That no preparation of diphtheria antitoxin shall be offered or exposed for sale in this city unless the receptacle containing such preparation has a label on which is placed a statement of the value of the contents in antitoxin, as measured by some generally recognized standard, and the name and address of the producer."

No one doubts that this resolution is in the interest of public health. But it is a curious fact that such a resolution is allowed to pass unnoticed by the advocates of personal liberty. The newspapers advertise, the drug stores display, any number of spurious cures for cancer, consumption, epilepsy, etc., and no one protests. But the sale of a spurious cure for diphtheria is forbidden!—*Medical Record.*

In re Tablet Triturates.—

In these days, when elegant and palatable medication is deemed so essential, why should the tablet triturate hold a place when it fulfills none of these demands and can only be recommended on the ground of the division of the dose? In no way is the flavor of the medicament covered. On the contrary, in some instances, as with strychnine, the ill taste is rather enhanced.

Where exact divisibility is desired, why not secure palatability also by crushing the tablet triturate and enclosing in the convenient gelatin capsule?

Another "Gold Cure" Victim.—

An inquest, resulting in a verdict of "death from alcoholism," was held in Chicago on the 12th inst. The victim—a commercial traveler named Dresser—was discharged "cured" from a "jag" institute about three years since, and, for a time, was one of the "star" cures. This makes the sixth or seventh "post" held in that city, within a few months, on "graduates of the gold cure." It might be worth while to gather up the statistics of this kind for the country at large.—*Journal of the American Medical Association.*

Got Well.—

Deacon Humsted: Then I sewed up the cut with waxed ends and covered it with a coat of tar to keep off the flies, and the next day the old cow was as good as ever.

Doctor Cutter: You don't mean to say she recovered?

Deacon Humsted: Come out of it straight as a string, sir!

Doctor Cutter: Wonderful! truly wonderful!

Deacon Humsted: Yes, my son says that shows the difference between amateur and perfessional surgery.—*Life.*

Change of Sex.—

Recently the Sheriff at Airdrie, England, was asked by the Coatbridge Registrar for permission to alter the register sex of a child from female to male. It appears that the child had been declared by the medical attendant at the time of birth to be a girl, but after eight or ten days, on certain inflammatory symptoms disappearing, the supposed girl turned out to be a boy. The register was accordingly altered.

Differs from Tuberculin.—

Some may have an idea that antitoxin is like tuberculin, and like it liable to inspire too great hope to withstand the test of time; but the two are quite different processes. With tuberculin a toxin is injected to develop antitoxin in the body, while in diphtheria antitoxin is first produced in the bodies of animals, and then injected into patients afflicted with diphtheria.—*Medical Record.*

Hypodermatic Catharsis.—

The editor of THE MEDICAL AGE has been investigating this subject quite extensively and has concluded that catharsis by hypodermatic injections with any known drug is a failure. We are sorry to say that his investigations correspond with our own experience.—DOCTOR J. M. DUNHAM, in *Columbus Medical Journal.*

Rectal Medication.—

No more convenient method of administering a rectal suppository can be had than by enclosing the medicament in a gelatin capsule. It is cleanly, safe, and certain in effect.

By moistening the capsule externally its introduction is rendered painless and its speedy solution assured.

Syphilis in Greenland.—

It is claimed, on the authority of Doctor Helms of Copenhagen, that syphilis was unknown in Greenland before 1872, at which time the first cases appeared at Iviglut, where the cryolite mine is located. To miners or sailors connected with this mine the original infection is said to have been traced.—*Exchange.*

Just So!—

The medical and religious press continues to fulminate against foot-ball, yet the public still pay $5.00 for a good seat at the game.

Possibly the free advertising given may account for the latter fact, since there seems to be an inherent tendency among all races to take delight in sports that verge upon the brutal.

That Lovely Gargle.—

It was the little one's first night at the concert, and as the applause which followed the prima-donna's wonderful trills subsided she leaned over to her mother and in a very audible whisper exclaimed: "Oh, mamma, didn't that lady gargle her throat just lovely!" —*Exchange.*

The Awakening.—

The *Medical Record* says the placarding of animal extracts on the public bulletin boards of New York "will awaken the keenest skepticism as to their real utility." The *Record* is a little slow. The awakening has already taken place.—*Food.*

Origin of Animal Extracts.—

A writer in India claims that animal extracts really originated from an old custom in the East, where for centuries the organs of animals have been eaten to cure diseases of like organs in man.

New Anæsthetic Mixture.—

Chloroform ten parts, ether fifteen parts, and menthol one part, used as a spray, is recommended as an excellent and prompt means for obtaining local anæsthesia, lasting about five minutes.

Avian Diphtheria.—

The rearing of fowl has been almost abandoned in Tunis, owing to the ravages of diphtheria among them, and the frequency with which the disease is communicated to human beings.

Practical Advice.—

If there be a sick one in the household, let him be put on the sunny side of the dwelling, and follow the doctor's instructions as to visitors.

They Don't!—

Now is the time when subscribers pay up and write appreciative letters of endorsement to the editor—or they don't.—*Medical Times.*

Insanity and Marriage.—

The statistics of all countries show that unmarried men are far more liable to insanity than benedicts.

Death from Hypnotism.—

The first well attested death from this cause occurred September 17th, 1894, at Tuzer, Hungary.

Remember.—

To use black pins in surgical dressings, since they will not rust and can be more readily seen.

What's in a Name?—

A London (England) dealer in osteological supplies bears the somewhat euphonious name of Skull.

Japanese Trained Nurses.—

Graduates of the Tokio Training School are doing excellent service with the armies in China.

Diabetes.—

Bankers, speculators and capitalists are most frequently the victims of diabetes.

Paralysis and Sex.—

Of every hundred cases of paralysis, eighty-six are males, fourteen females.

Croup in Upper Scandinavia.—

Over fifty per cent. of the cases of croup in Sweden and Norway are fatal.

Leprosy.—

India has 131,600 lepers; the Sandwich Islands 1,800.

A New Profession.—

Suing for damages.—*Homœopathic Recorder.*

Book Reviews.

A System of Legal Medicine. By Allan McLane Hamilton, M.D., and Lawrence Godkin, Esq. Volume 2; cloth; 8vo; pp. 738. Price, $5.50. E. B. Treat, New York.

This volume is a fitting companion to the first, with material presented in most concise and practical manner.

William D. Hornblower deals with the "Duties and Responsibilities of Medical Experts;" Allan McLane Hamilton with "Insanity in its Medico-Legal Bearings;" Calvin S. Pratt discusses "Mental Responsibility of the Insane in Civil Cases;" "Insanity and Crime" is by B. Sachs, M.D.; "Relations of Mental Defect and Disease to Criminal Responsibili y," by Louis Binsse; "Aphasia and Affections of Speech," by Charles K. Mills, M.D.; "Traumatic Neuroses," by Charles L. Dana, M.D.; "The Effect of Higher Power Electric Currents," by Allan McLane Hamilton, M.D., and George Deforest Smith; "Accident Cases," by Lawrence Godkin; "Mental Distress and Elements of Danger," by John E. Parsons; "Feigned Diseases of the Mind and Nervous System," by Philip C. Knapp; "Birth, Sex, Pregnancy, and Delivery," by Andrew F. Currier, M. D.; "Abortion and Infanticide," by Charles Jewett, M. D.; "Genito-Urinary and Venereal Affections," by F. R. Sturgis, M.D.; "Marriage and Divorce," by Simeon E. Baldwin; "Sexual Crime," by Charles G. Craddock; "Sexual Malpractice," by George R. Fowler, M.D. The volume is illustrated by most elegant plates and nearly eighty woodcuts, and also presents a very complete index.

Medical Jurisprudence, Forensic Medicine, and Toxicology. By R. A. Witthaus, A M , M.D., and Tracy C. Becker, A.B , LL.B. Volume Second; cloth; 8vo; pp. 751. Price, $5.00. William Wood & Co. New York.

The second volume, even more forcibly than the first, exhibits the high character of this work, of which there are yet two volumes to appear. Moreover the illustrations and plates, some of them in colors, are of the highest type of art. It embodies "Examination of Blood and Other Stains," and also of "Hair," by Edward S. Wood; "Abortion and Infanticide," by J. C. Cameron; "Determination of Survivorship," by T. C. Becker and J. Parmenter; "When Medical Examination of the Living is Permitted or Required by Courts of Law," by T. C. Becker; "Pregnancy, Labor, and the Puerperal State," by J. C. Edgar; "Sexual Incapacity," and "Unnatural Crime," by Irving C. Rosse; "Rape," by J. C. Edgar and J. C. Johnston; "Railway Injuries," by W. B. Outten; "Simulated Diseases," by W. T. Parker. There are also tables of cases cited by legal and medical authorities, index, etc. The scope of this work is such as to commend it to every member of both the medical and legal professions.

Treatise on Diseases of the Eye. By D. B. St. John Roosa, M.D , LL.D. Cloth; 8vo; pp. 650. Price, $5.50. William Wood & Co., New York.

This well known text-book comes to us in a new, revised and enlarged edition, with one hundred and seventy-eight original engravings, besides full-page chromo-lithographic plates. Of its scientific value and practical utility it is unnecessary to speak—the author's name is sufficient guarantee in this direction, and likewise that it will meet in the future, as in the past, the greatest favor at the hands of the profession. The following extract from the preface shows the motive and scope of the work:

> This book has not been written because the author supposed, for an instant, that there were not already in the English tongue many excellent treatises on diseases of the eye. It is presented to the profession because I have not deemed that the debt I owe to it could be even approximately satisfied, nor my own reputation as a teacher, whatever that may be, justly considered, unless I presented in a permanent and accessible form some of the results, with their personal coloring, of my long experience both in hospital and private practice in ophthalmic diseases and therapeutics.

There is probably no work devoted to the eye in the English language that is so satisfactory as this by Doctor Roosa.

Brother Against Brother. By Oliver Optic. Cloth; 16mo; pp. 451. Price, $1.50. Lee & Shepard, Boston.

Oliver Optic's books are always interesting. This new tale is the first of the Blue and Gray Army Series, which will include six volumes; though, as its author remarks in the preface, the number is "contingent upon the longevity of one, still hale and hearty, who has passed by a couple of years the scriptural limit of "three score years and ten allotted to man's life."

Old and young alike hope that Oliver Optic will be able for many years to come to give them periodically stories as full of fascinating interest as those he has been writing for the last forty years.

The scene of Brother Against Brother is laid in Kentucky, and the time of the story is that of the beginning of the civil war. It is fully as attractive as any of the publica-

tions of this author, and we believe from the outline of this volume that the succeeding ones will be a continuation of the same tale, making the series a practical exponent of every-day life in Kentucky during the great rebellion.

When the Woods are Green. By S. Weir Mitchell, M.D. Cloth; 16mo; pp. 400. Price, $1.50. The Century Co., New York.

This is a delightful story of a summer outing in a Canadian forest on the banks of a salmon stream. While a thread of romance with love-making is woven in, there is a great deal equally or more interesting devoted to outdoor life, the ethics of fishing, and the art of fly-casting. Incidentally there is also considerable instruction on how to bring up a family of boys, and especially how to manage the youngsters when turned loose in the forest. Nor are the philosophical or psychical elements forgotten, and two peculiar female characters are well worthy of study—one uncouth, but almost an angel in disposition, the other a she villain. As a whole the work is eminently readable and interesting, and will be more enjoyable to physicians in that it is written by one of the foremost of medical specialists.

Three Years in a Madhouse. By E. D. and Augustine Fleming. Cloth; 8vo; pp. 240. Price, $1.00. Donahue, Henneberry & Co., Chicago.

This is certainly a remarkable volume. It purports to be the autobiography of Mr. E. B. Fleming, formerly a merchant of Sulphur Springs, Texas, who was confined in the Northern Texas Insane Asylum as a hopeless maniac. During three years in this institution his reason gradually returned, but despairing of ever being released he cunningly made his escape and was never again captured, indeed was never heard of by his relatives for some years. The book includes a description not only of life in the asylum—which certainly is flattering rather than otherwise to the officials of that institution—but of his trials and hardships, during which he succeeded in making a journey across the continent to California, where he entered life anew and established himself in business.

Hidden Depths. By F. M. F. Skene. Paper; 12mo; pp. 260. Price, 50 cents. Rand, McNally & Co., Chicago.

This one of the publishers' famous Rialto Series is not a work of fiction in the ordinary acceptance of the term, and yet it is drawn upon fiction lines. It is a work strong in the cause of "justice, mercy, and truth"—a touching story of sorrow and despair, intended to be the means of stopping some of the world's people from entering on the downward road, and perchance coaxing them to travel in the "straight and narrow path."

We understand that the book has been condemned—why, we fail to see. Evil cannot be covered, consequently it is better to be brought face to face therewith in order to secure its eradication. Such is the scope and intent of the work, and we most unhesitatingly recommend its perusal to all.

Phrenological Journal. Price, 15 cents; $1.50 per year. The Fowler & Wells Co., New York.

The January number of this well known journal contains: "A Phrenograph of Chauncey M. Depew," by Edgar C. Beall; "Man versus the New Woman," by Alice E. Ives; "How to Study Strangers," by N. Sizer; "Character Study," by Reverend D. Power and N. Sizer; "Sketches of Phrenological Biography," by J. V. C. Smith and Charlotte F. Wells; "The Evil Eye," by George J. Manson; "Gall as a Discoverer and Physician," by H. S. Drayton; "Child Culture;" "Science of Health;" "Notes in Anthropology." The editorial contents are: "To Our Friends;" "A Pair of Noses;" "A Woman's Hand." There is a poem entitled "Joy," by H. H., the usual "Answers to Correspondents," etc.

The Birth of a Soul. By Mrs. M. A. Phillips. Paper; 16mo; pp. 336. Price, 50 cents. Rand, McNally & Co., Chicago.

This is number 65 of the well known Rialto Series, and is a work of unusual interest and merit. The plot deals with a Hebrew lady who, unless she marries one of her own race, will lose her great wealth. She is first depicted as of a somewhat sordid nature, but affection finally triumphs over all and she is united to the man whom she truly loves. By a peculiar turn of fate a cousin who comes into possession of her property dies suddenly, leaving it back to her in his will.

Suggestive Therapeutics in Psychopathia Sexualis. By Doctor A. Schrenck-Notzing. Cloth; 8vo; pp. 325. Price, $2.50. F. A. Davis Co., Medical Publishers, Philadelphia.

This volume, a companion work to Psychopathia Sexualis, will be published early in February. Its author is a well known collaborator of Krafft-Ebing, and the product of his studies will prove an authoritative work on suggestive therapeutics. Sold by subscription only.

Therapeutic Brevities.

Creosote in Phthisis.—Doctor J. C. Mulhall declares he has made use of Creosote constantly for ten years in the treatment of tuberculosis, and believes it to be by all odds the most important therapeutic aid yet discovered. Creosote, cod-liver oil and whiskey form a triad in which there is strength when skillfully used. The sputum is much diminished in quantity, improved in quality, and facilitated in dejection; the patient's appetite is increased, digestion strengthened, fever diminished. In properly selected cases Creosote is an unequivocal and very decided advance in the treatment of phthisis. Many patients take one hundred minims daily, without repugnance or discomfort.

Doctor Mulhall begins with three drops three times daily, and increases the dose as rapidly as the patient can bear it. It should never be administered on an empty, nor as a rule to a disordered, stomach—it should be an invariable rule to secure good digestion before administering a drug for the relief of a cough of any kind, and often one finds by the time the tongue is clean the cough has disappeared. Creosote is best administered dissolved in whiskey, the preparation taken in milk or well diluted with water. A trifle of whiskey helps digestion and dissolves the creosote thoroughly; and milk or glycerin added prevents it from irritating.—*St. Louis Clinique.*

Chronic Morphinism.—Obersteiner individualizes the treatment of the morphine habit. He suggests beginning with the average daily dose, and withdrawing the dose as rapidly as the patient can bear. When the dose has been reduced to a few centigrammes, caution is necessary, as then even a slight reduction is badly borne, and at this stage warm baths of from five to fifteen minutes' duration, followed if necessary by the cold shower or cold pack from one-half to two hours (temperature from 78° to 86° F.), are often of benefit. Alcohol in liberal quantities is often needful.

Regarding cocaine he declares that in treating the morphine habit it has no other use than to modify the symptoms and should only be employed when these become violent, say twenty-four to forty-eight hours after the last dose of morphine—and should always be given by the mouth in doses of three-quarters to one-and-a-half grains, never exceeding seven grains per day. Moreover, this should be steadily reduced, and never continued longer than five or six days. Nutrition must be improved by all possible means. If collapse occurs, morphine must be resorted to. Patients with cardiac trouble should not be subjected to complete withdrawal.—*Wiener Medizinische Presse.*

Little Known Properties of Chloral.—Doctor Holstein calls attention to the value of Chloral as a relaxant of smooth muscular fibre and a dilator of peripheral vessels. He employs combined with iodide of sodium or potassium in bronchial asthma and hæmoptysis, where it acts by dilating the peripheral vessels.—Cherchevsky, Rokitansky, Paul and others have likewise recommended Chloral in connection with iodide in doses of two to three grains several times a day, and believe the Chloral materially favors the action of the latter.

Holstein also employs in minute doses in treating the coldness of feet of the anæmic, chloro anæmic, and neuropathic subjects. He likewise finds it of great service in the chronic constipation of neurasthenics, which is generally so rebellious to treatment. The laxative dose is about one scruple taken before retiring, and its action is in general quite persistent, in some instances lasting several days. Like most drugs prescribed for this symptom, it is only to be employed occasionally, lest a habit be formed.—*Revista Clinica e Terapeutica.*

Chronic Cocainism.—Investigations of Doctor J. B. Mattison, of Brooklyn, give evidence that some of the properties claimed for Coca and Cocaine are, to say the least, doubtful. As stimulants to the nervous and reproductive systems both are failures—on the contrary, they prove depressants. Further, under a continued use of the drug, temperament is modified—the patient becomes idle, unclean, selfish, and neglectful, and, in short, disturbances are induced that closely resemble those of the last stage of morphinism.

In recent cases, he declares, the drug may be suppressed suddenly, the pain and insomnia being combated by hypnotics, notably Lactophenin and Bromhydrate of Hyoscine. In cases of long standing it is better to diminish the drug gradually and replace by hypodermatic injections of Benzoate of Caffeine.

Cactus Grandiflorus in Heart Disease.—Doctor Mikhailoff declares that in Graves's disease, organic cardiac affections, and in chronic parenchymatous nephritis, *Cactus grandiflorus* given thrice daily proves most

serviceable. There is a rapid rise of arterial tension induced by its administration, which, however, is not very marked and disappears shortly after discontinuing the drug. In exophthalmic goître the secretion of urine is increased, while in cases of renal disease it remains unaltered; the cardiac palpitation and dyspnœa quickly subside. To secure marked and permanent improvement a prolonged administration of the remedy in gradually increasing doses is necessary.—*Kharkov Jurnal Meditziny i Highieny.*

Calcium Chloride for Pneumonia.—In *The Practitioner* Doctor Crombie recommends the employment of Calcium Chloride in five- to fifteen-grain doses every four hours in the treatment of lobar pneumonia. Of twenty-two cases treated, but one terminated fatally. They ran a mild course and were characterized by subsidence of temperature almost to normal after the lapse of two or three days, and absence of distress and danger associated with high temperature. In several the disease was arrested in the stage that it had reached at the time treatment was instituted. In explanation of the action of Calcium Chloride, it is suggested it may neutralize the toxic action of peptones or albuminoids circulating in the blood.

Fluid Extract Cedron.—This drug will remove the ecchymosis resulting from contused wounds quicker than any other remedy. A lady fifty years old was bitten on the upper eyelid by a large tarantula, and three-quarters of an hour later the eye was closed and the tissues around it of a dark livid hue. Application of a compress of several thicknesses of muslin saturated with fluid extract of Cedron, and internal administration of the drug in six-drop doses in water, relieved the swelling in less than an hour, and the discoloration (which extended far below the orbit) also speedily disappeared. I find the fluid extract of Cedron one of the best dressings for contused wounds.—Doctor D. C. Bennett.

Veratrum in Catarrhal Pneumonia.—Doctor Sutliff, of Sacramento, California, believes there is no remedy more specific for any disease than Veratrum Viride in catarrhal pneumonia in children. He does not, however, believe the remedy has the same effect on other forms of pneumonia, and thinks to this is probably due the fact that it has sometimes received unlimited praise and at others overwhelming condemnation. He administers in small and oft-repeated doses until the pulse is reduced and respiration lowered; usually employs in the form of tincture, combining with sweet spirit of nitre and syrup of yerba santa.

Strophanthus.—This drug is both valuable and safe. It is a cardiac tonic, a diuretic, and quickly relieves præcordial pain and dyspnœa. The tincture is the best preparation, and should be given in small (two minims) doses, gradually increased and combined with stimulants and antispasmodics, such as ammonia and ether. It is most useful in aortic regurgitation, as its power of lengthening diastole is not so great as that of digitalis, nor has it so marked a cumulative action; and any danger which may lurk in its administration is considerably lessened by its combination with ether.—Doctor Taylor, in *Medical Record.*

Uva Ursi.—There are other purposes for which Uva Ursi may be advantageously used than those pointed out in the therapeutics of the day. For instance, in a case of tardy labor from inertia it is a better remedy than ergot. For this purpose I use a strong decoction of the leaves, and give freely. It is better than ergot to arrest flooding in nearly every case. In both labor and hæmorrhage where such remedies as ipecac, gelsemin, bugle weed, etc., are sometimes employed, try the Uva Ursi alone. I have used it for nearly twenty years in such, with but few failures.—Doctor J. Davis, in *American Medical Journal.*

Hyoscyamine in Retention of Urine.—Two years ago I attended a very severe case of typhoid fever in a patient twelve years of age, in which I was confronted with retention of urine. To have applied the usual treatment (catheterization) would have required an anæsthetic or strapping down. In my dilemma I thought of the relaxing effect of Hyoscyamine, and so gave every fifteen minutes until the desired effect was induced. I have since tried it in a number of cases, and though it requires four or five doses I never failed to relieve the patient.—Doctor J. H. Fretz, in *Medical World.*

Yeast and Boils.—Doctor Debouzy declares that the administration of two to three teaspoonfuls of brewer's Yeast during the twenty-four hours, mixed with beer and taken before eating, is an effective remedy for both carbuncles and boils. In cases of repeated crops of furuncles it may happen that new ones

appear, but they are readily aborted by this treatment, which should in such cases be prolonged for a fortnight. The only inconvenience arising from the use of the yeast is diarrhœa, and this is not often produced.—*Lyon Médical.*

Dysmenorrhœa.—In the *Therapeutische Monatshefte*, Doctor Schwarze discusses this condition when associated with ante- and retro-flexion of uterus, and lays special stress upon the value of gymnastics and massage; he however remarks that the latter is not available in well developed non-anæmic women. Also in non-inflammatory cases, Liquor Sedans gives brilliant results which are not to be obtained with any other remedy. He recommends a teaspoonful three times a day, given five to seven days before menstruation.

Pernicious Anæmia.—According to Doctor Stengel, Arsenic is almost a specific, and best given in the form of Fowler's solution beginning with two-drop doses, rapidly increasing to ten drops, and then more slowly to fifteen or more; it should always be given after meals. Gastric disturbance more frequently subsides than becomes aggravated from its use. Under no circumstances, however, should the remedy be pushed so far as to induce diarrhœa. A valuable adjunct to the treatment is to confine the patient to bed and to nutritious and assimilable diet.

Digitalis in Goitre.—The most efficacious medical treatment of goitre consists in the internal administration of Digitalis and the local application of an iodide ointment. The goitre diminishes in size, and even disappears, with astonishing rapidity. The favorable action of Digitalis in hypertrophy of the thyroid is explainable by its influence on arterial tension; but this employment of the drug is not new, as it originated with Doctor Murray in 1776.—*Medical Week.*

Alstonia.—Alstonia constricta is a cerebro-spinal stimulant and tonic, acting positively on the great sympathetic nerve centres, and stimulating the vital forces of the entire system; as a nerve stimulant and tonic it can be given in doses of three to five grains (or three to five minims fluid extract) after meals and on retiring. Given in this way there is speedy response, the appetite, digestion, assimilation and circulation being wonderfully improved.—*Chicago Medical Times.*

Pilocarpine in Rheumatism.—Though sodium salicylate may be regarded as a specific in articular rheumatism, it sometimes causes toxic symptoms so grave as to render its use impossible. In one such case, a patient who suffered from two or three attacks of rheumatism yearly, I used hypodermatic injections of Pilocarpine in one-sixth grain doses, which led to complete recovery within six days.—Doctor Drappier, in *Universal Medical Journal.*

Treatment of Anal Fissure.—Doctor J. H. Yarnell suggests the treatment of fissure of the anus by means of pure Collodion applied directly to the open wound. Though the application causes intense momentary pain, this is quickly succeeded by a pleasant, comfortable sensation. It contracts the part and acts as a protective, beneath which healing takes place rapidly.

Mullein Oil and Cancer.—Doctor J. C. Wentz writes the *Homœopathic Recorder* that Mullein Oil is not only the best possible dressing for burns, but when distilled by sun exposure it often checks the growth of cancer—it is not curative, but simply reduces the condition of the morbid growth to one of *statu quo.*

Diabetes.—In *Gazzetta Degli Ospitali*, Doctor Leoni reports great satisfaction from the use of Jambul. He declares that the drug contains an active principle which, while not specific, is yet capable of neutralizing the diabetic process in individual cases.

For Croup.—Two drops fluid extract Jaborandi every hour will be found to afford material benefit. It is especially indicated in those susceptible to hoarse cough suggestive of croup on every change of the weather.—*Medical Times.*

La Grippe.—Of all the remedies recommended for this malady *The Practitioner* declares the old-time Boneset tea (infusion of *Eupatorium perfoliatum*) will relieve more quickly and thoroughly than any other remedy.

Gelsemium in Parturition.—Normal liquid Gelsemium is successful in affording relief in that condition of labor characterized by thick, rigid cervix with cutting abdominal pains.—Doctor Howell.

Medical Progress.

HAS THE WEST TO LEARN ANYTHING IN MEDICINE FROM THE EAST?—History tells us that when most of the present countries of Europe were only in a primitive state of culture, India was renowned for its grandeur in science and literature, and that the Indians excelled in the "art of medicine," which latter was borrowed by the Arabs, who transferred a portion of their acquired knowledge to the Greeks, who in their turn imported it into the rest of Europe.

As a natural consequence of the various invasions and frequent change of rule, India has lost a great deal of her literature, while from one cause and another, and the desire to ape the customs and ordinances of the various conquerors, many of the arts have sunk into oblivion or disuse, as Oriental researches have frequently shown.

In ancient medical works we find the terms *Vaidya*, *Bhishaka*, and *Dhanavantari*, respectively applied to physicians who knew of one, two, or three hundred remedies for any *one* disease; and this, coupled with the fact that many persons discharged from hospitals as "incurable" have found relief and permanent benefit from native medication, would go to show that there *is something* for the West to learn from the East, and that the Pharmacographica Indica is not to be despised or regarded as worthless, simply because many of our indigenous medical practitioners have gleaned their little knowledge from British works.

Compared side by side, we cannot but be astonished to find that though it is very explicit and exhaustive in its description of therapy and physiological action, still the non-official drugs bear a very small relation to the official preparations; and British pharmacy is far more limited than is Indian pharmacy, with its numberless drugs and *huge* variety of metallic preparations, whose combination with vegetable elements gives them not only a greater scope for medical employment but less risk of accumulative virulence.

Were British and native diplomates of the English system of training only to take the trouble to apply to Indian drugs a tiny share of the attention they have paid to studying British pharmacy, they would much sooner gain the confidence of India's laboring classes and get far better results than it is possible to obtain by steadfastly adhering to the administration of drugs whose physiological properties were chiefly tested in those countries where the climate and other life conditions are a long way different to those in India.

Now though *kobiraji* cannot compete against or equal the surgery of the West, still we have amongst the non-diplomaed practitioners of the East many persons who have made ophthalmia and other diseases a specialty, and have performed both major and minor operations so successfully that native patients *flock* to them in preference to attending charitable medical institutions; and just to show how clever some of these men are, I will quote three among many instances that came within my personal observation:

1. Noticing a tailor of about seventy years of age, with extensive cataract of both eyes, plying his needle as vigorously as anyone with sound eyesight could, I suggested operative intervention to prevent his entirely losing his sight; but to my surprise he said: "I am now seventy-two years of age, but my sight began to fail me at the age of forty, and yielding to the entreaties of some of my friends I consulted a quack oculist who told me that though my eyes were unfit for direct operation he could arrest the further progress or development of the cataracts. He then cut away a portion of the flesh from the inner surface of the upper lids of both eyes. The wounds healed within a fortnight, and from that time up to the present there has been no change for the worse." I carefully examined this artificial depression in each of the upper lids, and would very much like to know what relation exists between these depressions and the cataracts.

2. A boy, whose intestines were protruding through an abdominal wound, was brought to a certain civil surgeon, who was unable to reduce the rupture. A *kobiraj* (call him *quack*, if you like) offered the boy a pinch of strong snuff which he desired him to inhale with a *long* inspiration. The boy did so, and, the effort retracting the protruding bowel, it only remained for the civil surgeon to close up the wound. Perhaps you will say this was only a matter of common sense. Granted, but it required judgment and presence of mind to know when to apply it.

3. A rich merchant of Berar took his son, who was afflicted with urinary calculus, from hospital to hospital; but as the boy appeared to be too emaciated and too weak to be able to stand chloroform, no surgeon would consent to the responsibility of an operation. In despair the father sought the services of a *kobiraj*, who agreed to do the needful cutting provided the father gave him a document completely exonerating him from blame in the event of the boy succumbing to operative measures. Putting the lad under the influ-

ence of *Cannabis indica*, the *kobiraj* incised the bladder, and after removing a stone, weighing nearly one ounce, filled up the wound with some sort of green ointment. Perfect healing occurred in twenty-two days.

It is far from difficult to multiply instances of the above kind where native and *Ayurvedic* medication have given excellent results; but I exceedingly regret to note that while many of the European practitioners in India are turning a close attention to the investigation of the intrinsic merits and claims of Indian drugs, there are few indeed of the native practitioners who will enter upon this field of scientific research, and fewer still who will take the trouble to record their experiences or publish them for the benefit of their fellow practitioners.

There is not a single race or caste of Indians but has its medical practitioners, both university trained and *Ayurvedic*, and in every Indian tongue are to be found books and literature and traditions treating on the indigenous drugs of India and their various compounds and preparations; and we note that in those portions of this country which are almost exclusively inhabited by Indians there is next to no encouragement for those practicing the British system of medicine, for the simple reason that the majority of the races of India are too superstitious to take to a new system of treatment, and have not the inclination nor the faintest desire to abandon their *hakims*, *kovirajes*, etc., from whom they have derived great benefit, and many of whom are exceptionally clever: thus showing that if Eastern medicine were really as useless as it is sometimes accused of being, British medicines would have come into much greater favor than they at present obtain in this country, and similarly we are justified in maintaining that *the West has something to learn from the East* as regards medicine and drugs.

Among Indian works on drugs, those of *Charaka*, *Shushruta* and *Wag Bhatta* claim especial attention, as they contain descriptions, etc., of drugs that would make a valuable addition to the British Pharmacopœia, and are quite worthy of being brought before the notice of a joint committee composed of *picked* British and native practitioners from *all* the presidency districts. If the Government of India could only see its way to elucidating these points and encouraging a *proper* study of Indian drugs, it would confer an inestimable boon on the public of India by opening up the way to reviving ancient literature and stimulating scholars to diligently search and wisely interpret old but really valuable works and records that have too long been neglected or ignored.

With the starting of medical magazines in India we had hope of their being used as the means of introducing native drugs to the notice of the medical profession as a whole; but our hopes are doomed to disappointment, as there is *no* medical journal extant in which may be recorded or published the pharmacology of Indian drugs or the results from the administration of them.* Fate, unkind Fate, thus deprives us of much that might have proved useful and which, with the modern light of perfected science thrown on them, would surely have proved of inestimable value to medical practitioners of all creeds and denominations.—R. Atmaram, C.M.S., in *Indian Medical Record.*

Astigmatism as a Factor in Causation of Myopia.—In the majority of cases myopia is a disease of the eyeball of more or less gravity—a disease which not only diminishes sight, but tends to destroy it through organic changes in the sclerotic, choroid, vitreous, lens, etc.:

Myopia cannot be cured—its treatment is limited to the restriction of its development, the curbing of its ravages, and the correction of its disabilities:

It is induced, usually, by the efforts of the eye to perform its work when crippled by astigmatism; accessory factors in the causation of myopia include all conditions which make it more difficult for the eye to see quickly and accurately, or which impair the nutritive supply:

Eyes normal in structure do not become myopic under the strain incident to life in the schools, or in business or professional pursuits; nor do they suffer from asthenopia, or interfere with the functions of the nervous system or any other apparatus in the body:

The prevention of myopia depends mainly upon the early correction of defects of structure, and the continuance of this correction at least throughout the period of actual growth; to this it is wise to add such other conditions as will to the largest degree restrict eye-strain:

The most effective method of eliminating myopia from the race is the requirement of a physician's certificate of physical soundness from all who seek an entrance to the public schools, said certificate to include a correction of all astigmatic defects. — Doctor Leartus Connor, in *American Lancet.*

---

*A slight misconception, as our own columns have always been open to pharmacology, therapeutics, etc., and we would be glad to disseminate the knowledge our contributor complains of the lack of.—Ed. *I. M. R.*

Douching in the Puerperal State.—With regard to antiseptic midwifery, Doctor Cullingworth emphasizes the danger of carrying infectious micro-organisms from the lower part of the genital tract into the upper in using douches. He is of the opinion the douche ought never to be administered except by the doctor or a thoroughly skillful nurse In so far as private practice is concerned, it is not at all certain the patient is not safer without the douche. Far too much attention has been paid to douching, to the neglect of the really important measures. With reference to the danger of sublimate poisoning, no case has occurred where the douche has been omitted. Sublimate absorption can only take place where the solution is used internally. Employed as a disinfectant of the practitioner, the nurse, and the instruments, the legitimate objects for disinfection, corrosive sublimate is absolutely safe, and there can be little doubt, from the comparative observations made by Doctor Boxall at the General Lying-in Hospital, that corrosive sublimate, for obstetrical purposes, is the most efficient antiseptic at present known.—*British Medical Journal.*

Ocular Ballottement.—The diagnosis of fluid vitreous with floating opacities may be aided by a method not laid down in textbooks. The retinoscopic mirror is used in the same way as in indirect ophthalmoscopy. The patient has to be "trained" or carefully instructed in order to carry out the manipulation rightly, the essential point of which consists in halting a downward sweep of the eye suddenly and at such a point that the oculist can have a good view of the post-pupillary field. Direct the patient to look up to the ceiling and then to swiftly look at an object in front and on a line horizontal with the eyes, holding the gaze steadily there. If opacities floating in a fluid vitreous exist, this sudden "flip" of the vitreous chamber upward, followed by sudden stoppage, flings the opacities upward, and with the ophthalmoscopic mirror they will be seen again to descend like snow-flakes falling outside of a window in the night. This method of diagnosis might appropriately be named *ocular ballottement.—Medical News.*

Eleven Months' Pregnancy.—Max Bensinger reports a case of eleven months' pregnancy in a healthy woman twenty-seven years of age, who had previously given birth to two children (of normal weight and appearance) at proper term. The boy was born alive after twelve hours' labor, without instrumental aid, and weighed eleven pounds. The placenta was exceedingly large, the amniotic fluid very scanty. The case has considerable interest from a medico-legal point of view, inasmuch as the courts in most countries accept three hundred days as the extreme limit of pregnancy. If the husband of such a woman should happen to die during the first or second month of gestation, it would not only blacken her reputation, but the child would be deprived of its rights of paternal inheritance, which might involve a large estate, or even a crown; hence the importance of physicians recording all cases of retarded pregnancy.—*Pacific Medical Journal.*

A Sign of Breech Presentation.—When, in a woman who has passed the sixth month of pregnancy, a sharp pain is produced by placing the hand on the fundus uteri, it may be almost affirmed that there is a breech presentation. The fact is very frequent, although not constant, being present in about seventy per cent. of cases. The pain is sometimes spontaneous. How is it to be explained? According to Pinard, it is due to the irregular distention produced by the rounded mass of the head. If version be performed, the pain disappears.—*La Clinique Internal.*

Conception in a Woman with Ovarian Tumor.—Opinion is divided as to whether an ovarian tumor is hastened or retarded in its growth by pregnancy. Sixty per cent. of labors end normally in the presence of an ovarian tumor. But Heilberg's statistics show that sixty-seven per cent. of the infants die, hence obstetricians are encouraged to more frequent recourse to ovariotomy. Olshausen's record of results of ovariotomy in pregnant women shows a mortality of only 9.8 per cent.—about the mortality in general ovariotomies.—Doctor A. R. Simpson, in *Edinburgh Medical Journal.*

Formation of Urea.—Kauffmann (*Archives de Physiologie Normale et Pathologique*), as the result of personal investigation, arrives at the conclusion that urea exists in all of the tissues of the mammalian organism, and in greater proportion than in the blood. The production of urea is participated in by all of the tissues, although in varying degree, the liver being the most active seat of formation. —The production seems due to processes of denutrition that take place in various tissues, and results especially from the work performed by the liver.

The Medical Age.

VOL. XIII. DETROIT, FEBRUARY 11th, 1895. No. 3.

Original Articles.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 44.*]

The Arabic Period, which began with the second destruction of the Alexandrian Library, 640 A.D., ends with the fourteenth century. At the commencement of this period the Roman Empire of the West scarcely existed: the magnificent territory which composed it had been overrun and subdued by barbarous tribes from the forests of the North, while from its ruins had risen several independent kingdoms—that of the Franks in Gallia, of the Visigoths in Spain, and of the Lombards in Italy. The last of the Western emperors of note was Justinian, whose army and generals—especially the genius and heroic devotion of Belisarius—threw some glory upon Italy, Sicily, Africa, and Spain. Meantime the Empire of the East, surrounded by enemies, and harassed from all directions, still sustained itself with vigor. The Turks had begun to show themselves on the banks of the Danube; those eternal enemies of Rome, the Persians, made incessant war; and a new and terrible enemy had sprung up in the deserts of Arabia. Then came one who was at the same time legislator, prophet, and conqueror, and united under one faith and one leader tribes hitherto divided and warring against each other. Thus arose a powerful and enthusiastic nation, animated by thirst for conquest and ardor for proselytism. In less than a century after the first preaching of Mahomet, all of Arabia, India, Syria and Egypt were in the hands of his followers. In the year 640 Amrou effected the conquest of Egypt, seized Alexandria, and the great library of 500,000 volumes was, by order of Omar (successor to Mahomet), delivered over to the flames; and the historian Abulpharagius declares that these books served for six months to heat the public baths, 4,000 in number. Such were the first fruits of the establishment of Islam.* Happily, zeal of proselytism somewhat abated among the Mussulman princes, and religious fervor gave place to policy, so that the later Arabian caliphs showed themselves in general the protectors of the arts and sciences. Some, indeed, endeavored to collect the débris of the scattered treasures that had been so fortunate as to escape the ignorant fanaticism of their predecessors; and others, more tolerant even than the Christian princes of the time, received without distinction all men of merit who took refuge in their State, gave them employment, and recompensed them for their services. On this account philosophers and persecuted "heretics" sought an asylum among infidels, and found there the protection which Christianity did not afford—in return for which they gave their protectors the benefits of Greek civilization.

Of all the Moslem rulers, the most distinguished for love of learning and general enlightenment was Haroun-al-Raschid, the Charlemagne of the East, contemporary and emulator of the glory of the emperor of the Franks, the hero of a hundred Arabic poems, whose dominion extended from the borders of the Indus to the heart of the Spanish Peninsula. He embellished Bagdad, his capital, with schools and hospitals. His son Almamon founded the Academy of Bagdad, which became the most celebrated of

*Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

*See a very vigorous denial of this historical statement in *The Nineteenth Century*, October, 1894, page 555.

the age; likewise spared no pains to draw to his court the most illustrious men of all countries. He enjoined each of his ambassadors to purchase all the writings of the philosophers and physicians that could be found, and these he required to be translated into Arabic;—his interpreter, Honain, a Christian, was employed at translating for forty-five years, and received for each book rendered into Arabic, literally its weight in gold.

The *eclat* which the Moorish caliphs shed upon Spain from the tenth to the thirteenth century is well known. The cities of Cordova, Toledo, Seville and Murcia possessed public libraries and academies, and students from all parts of Europe flocked to them to be instructed in arts and sciences; the library of Cordova alone embraced more than 224,000 volumes. Thus it will be seen that the dominion of mental and temporal affairs passed from the Greeks and Romans to the Saracens.

Arabian medicine constitutes one of the most interesting chapters in the history of our art. An offspring from Greek schools, it was for nearly one hundred years the foster-mother of that art, and although it gave rise to no great discovery nor wonderful step in advance during all this period, it nevertheless kept alive all the learning of the past and clarified rather than made it turbid. In the sixth century the Nestorians (followers of Bishop Nestor), having been driven out of Syria, settled in Persia, Mesopotamia, and Arabia, and there founded schools and other institutions such as they had had at home—schools in which, beside the ordinary philosophic studies, medicine received a share of attention. Thus it came about that by the seventh century Arabian physicians were everywhere known and in high repute. Naturally the basis for their studies embodied the writings of Hippocrates, Galen, Oribasius, and Paul of Ægina; and the first Arabian works consisted solely of translations from the Greek, first out of their Syriac rendering, and later from the originals. Indeed, so much eminence was finally achieved by Arabian physicians that more than four hundred are known by name as authors.

The first author deserving of mention was *Bachtischua*, of Nestorian stock, celebrated in Jondisapur, director of the medical school, and later physician to Caliph El Mansur, in Bagdad. Of his descendants several became well known in the same field.

Alkindus—this being the Latin arrangement of his Arabic name—came from a Persian family who lived first in Basara, and later at the court of the caliphs El-Monon and El-Motasin in Bagdad. He enjoyed a very high reputation as physician, philosopher, astronomer, and mathematician, and died A.D. 873.

Mesue, the first of his name, sometimes known as Janus Damascenus, was director of the hospital in Bagdad, and physician to Haroun-al-Raschid. He was born in 777, wrote extensively (since at least forty of his works have been catalogued), and died in 857 in Samarra.

Serapion, the elder, also sometimes known as Janus Damascenus, and whose Arabic name was Serafiun, was born in Damascus—the exact date is not known,—and died some time prior to A D. 930. He was author of two volumes of aphorisms concerning the practice of medicine, which had at his time the greatest repute.

The most celebrated of the early Arabian physicians was Rhazes, born in the Persian province of Khorassan, A.D. 850. According to the historians of his nation he was a universal genius, equally famous in music, astronomy, mathematics, chemistry, and medicine; he was surnamed "The Experienced." At the age of fifty he was one of the most distinguished professors in the Academy of Bagdad, where students came from great distances to listen to him. Chosen from among a hundred colleagues to direct the grand hospital of that city, he displayed indefatigable zeal and most scholarly learning, even to his old age and in spite of loss of sight, which overtook him at the age of eighty when his reputation was at its height. Two years after this misfortune (*i. e.*, in 932) he died. His generosity, which was proverbial, and his compassion for the poor, left him penniless at the time of his death. Some 237 monographs of his have been catalogued, though the greater number of his works are practically lost. Two treatises on medicine remain which afford excellent counsel in many respects; among other matters he advises:

Study carefully the antecedents of the man to whose care you propose to confide all you have most dear in this world, that is, your life and the lives of your wife and children. If the man is dissipated, is given to frivolous pleasures, cultivates with too much zeal the arts foreign to his profession, still more if he be addicted to wine and debauchery, refrain from committing into such hands lives so precious.

His greatest publication was "*Continens*"—extracts compiled from all authors for his own use,—divided into thirty-seven books, constituting an abridgment of the science of medicine and surgery up to his time; and notwithstanding its imperfect state, this work was held in greatest reverence and was a common source of knowledge among Orientals, long after his day.

Haly-Abbas, a Persian by birth, flourished fifty years after Rhazes, and died A.D. 994. His "*Almaleki*" in twenty volumes constituted a quite complete system of theory and practice of medicine, which however was in large measure taken from Rhazes' "*Continens.*" It is generally regarded as the best work of any of the physicians of the Arabic Period; it is divided into three parts—a book on Health, a book on Death, and a book of Signs; and it is interesting to know that the portion devoted to midwifery and obstetrics was in the hands not only of the profession, but also of the midwives.

Avicenna—Latinized form of his Arabic name, Ebn Sina—was born in Bokhara, in 980. From his earliest youth he manifested a remarkable disposition for scientific study, and it is claimed that he mastered the entire Koran at the age of ten years; also that he devoted his entire days and the greater part of his nights to research, mastering philosophy, mathematics, astronomy, and, later, medicine, which he studied at the university at Bagdad, in which city his talents were chiefly exhibited. He was received at court, loaded with favors, and elevated to the dignity of Vizier, but suddenly fell into disgrace, was deprived of property, imprisoned, and even threatened with execution. After two years, however, he was restored to liberty, and once more possessed the consideration of the public and the court, becoming the recipient of new honors. Meantime he had given himself up to intemperance, by which his previously robust constitution was undermined, and this with excessive labor brought about his demise at the too early age of fifty-six, in the year 1037. He was the author of several books, the chief being the "*Canon Medicinæ*," which remained a classic for six centuries, constituting the medical code of Asia and Saracenic Europe; no author since Galen had enjoyed so wide and extensive authority in the medical world; and in the various medical schools professors for the most part confined themselves to reading the "*Canon*" from their desks, explaining and commenting upon its text. The work was divided into five volumes, of which the first two comprised the principles of physiology, pathology, hygiene, and therapeutics, arranged to conform to the teachings of Aristotle and Galen; the third and fourth dealt with treatment; and the fifth was devoted to the preparation and composition of remedies. Avicenna appears to have surpassed in subtlety both Aristotle and Galen; he was fond of metaphysical speculation, and his works were too much filled out with subtleties of language rather than with true science. Authors of this period were fond of torturing in every way possible the writings which they undertook to edit or quote from, and instead of devoting themselves to original research, wasted time in seeking for vague and hidden meanings. That man was most esteemed as learned who could see the greatest subtlety in some passage from one of the ancient writers; consequently that which was obscure or unintelligible was deemed the most sublime and philosophic. A very brief study of the "*Canon*," for instance, will show this; and in graphic pictures of disease the work by no means approaches those of Aretæus or Alexander of Tralles, for Avicenna too often contented himself with mentioning merely a list of symptoms without indicating in any way their progression, characters, or duration. Undoubtedly just was the criticism of an Arabian poet: "His philosophy had no sound foundation, and his medical knowledge availed him nought for the possession of personal health and long life."

Albucassis was born in Zahra, near Cordova, about the beginning of the eleventh century, and is supposed to have died A.D. 1122, at the advanced age of 101. He was autho

of an abridgment, or compilation, devoted to the practice of medicine, the only novelty of which is a small portion devoted to surgery, in which are described certain instruments. He says:

I have detailed briefly the methods of operations; I have described all necessary instruments, and I present their forms by means of drawings; in a word, I have omitted nothing of what can shed light to the profession. . . . But one of the principal reasons why it is so rare to meet a successful surgeon is that the apprenticeship of this branch is very long, and he who devotes himself to it must be versed in the science of anatomy of which Galen has transmitted us the knowledge. . . . In fine, no one should permit himself to attempt this difficult art without having a perfect knowledge of anatomy and the action of remedies.

Not a word is said about dissections, however—from which we conclude they were not tolerated in his time. He resorted enthusiastically to the cautery, and recommended it in spontaneous luxations and the commencement of curvature of the spine. He refers particularly to instrumental delivery and the extraction of the after-birth; and when speaking of fractures and dislocations, he remarks: "This part of surgery has been abandoned to men of vulgar and uncultivated minds, for which reason it has fallen into undeserved contempt."

Avenzoar, born in 1113 of a Spanish family which had many illustrious scions, was instructed in medicine by his father, and ultimately achieved great celebrity throughout Spain and Africa; for a time he lived at the court of the Prince of Seville, loaded with honors and presents, and finally was made Vizier. Among other works he wrote a treatise on renal diseases, in which he outlined the treatment of calculus and described an operation therefor. He died in 1161.

Averroes (as he is generally known, though his Arabic name was Aben Roschd) was born A.D. 1166, in Cordova, where his father held official position. After being grounded in philosophy, mathematics, and other sciences, he became a pupil in medicine under Avenzoar. The greater part of his life was passed in Seville, where he was greatly esteemed and finally knighted. In 1195 he was called to the court of the King of Spain and Morocco, in Cordova, where he received the highest honors—only, however, through some misunderstanding, to be disgraced; but he soon recovered his former position and dignities. He wrote extensively, not only on medicine but on philosophy, his writings taking throughout a more or less dialectic character. He died in 1198, and from him descended a number of physicians who achieved more or less reputation.

Maimonides was born in Cordova, A.D. 1135. He early devoted himself to the Talmud, and in his extended travels visited Jerusalem; he even founded a school of philosophy in the East, which, however, had only a brief existence. He died in 1204. He ranked higher in philosophy than in medical art, and seems to have been imbued with the methods of his teacher, Averroes, and is generally regarded as a theorist rather than as a practical physician, although he wrote more or less on medical topics, and is particularly remembered for an essay upon poisons. He was about the last of the Arabians who deserve special mention.

During the period which was nearing its close at the time of the death of Maimonides, the Arabs embraced with much ardor the study of medicine, and translated into their language nearly all the treasures that had been amassed by the Greeks; indeed, the preservation of many of the great writings which would otherwise have been lost is due solely to this fact. Strange to say, however, the Arabians neglected Latin authors, and apparently possessed no knowledge of Celsus or Cœlius Aurelianus. As religious prejudices prohibited dissections, they were obliged to rely solely upon the anatomical descriptions of Galen, and succeeded in increasing the errors of the original by inaccurate translations. So far as originality of observation goes, the Arabians were in most respects behind the Greeks; nevertheless they were the first to differentiate eruptive fevers, to which the latter paid little or no attention. The Arabian school also supplied the knowledge of purgatives, such as cassia and manna, which replaced the drastics employed by the ancients; also the mode of preparation of syrups, tinctures, distilled waters, pomades, and plasters.

While the Arabians were gradually rising

by their power, intelligence, and renown, the Greeks were declining in inverse ratio: the genius, courage and ancient virtues of the latter grew weaker and weaker until they seemed on the verge of extinction. In the medical history of these centuries, in all Europe not under Moslem rule, there was but one man entitled to mention as an author in medicine, viz., John Actuarius, the son of one Zacharia. He lived at the close of the thirteenth and the beginning of the fourteenth century; was employed at Constantinople, his surname being the honorary title of the court physicians. He is more commonly known as Zacharia. Of his life we know little, save that he wrote several volumes, for the most part abridgments or commentaries on the doctrine of Galen. He laid great stress on the theory of critical days, and sustained his views by astronomical hypotheses most ingeniously combined. His was the first Greek work in which were mentioned the remedies introduced by the Arabians, yet he has not a word to say of variola, measles, spina ventosa, and other affections fully described by Arabic authors. He held remarkable views concerning the nature of man, whom he supposed to be formed by the union of two contrary substances, the soul and the body; described somewhat elaborately an imaginary plexus of veins connected with the digestive organs, through which the animal spirits were elaborated and purified; also, and quite methodically for his age, he explained the functions of the animal economy and the ætiology of disease.

While the clouds that befogged the study of medicine in the Empire of the East thus grew heavier and heavier, we must not be blind to the melancholy spectacle concerning the provinces composing the Empire of the West. Barbarians in swarms, from the forests of Germany and Scandinavia, had swept its various portions, pillaging, destroying, and reducing to slavery its inhabitants. In southern Europe everything was changed. Each generation witnessed some new and unheard-of invader who demanded his share of booty and renown, and left a track of desolation behind him. There was a brief period of order when Charlemagne reunited under one dominion these divers races, and seemed to have resuscitated the Western Empire, but no sooner was he dead than its elements, being devoid of affinity, broke apart. Former vassals, no longer restrained by the firm hand of the Emperor, made common warfare against his successors and against each other, and for several ages there was nothing but a succession of wars and invasions. Feudalism gave some sort of character to this military anarchy by affording repose, and in a measure security, for those who had hitherto been trampled under foot, but learning and the sciences fell into complete neglect, and it was with great difficulty that a very small number of men found within the pale of the church a limited protection that enabled them to devote themselves to the study of medicine and ecclesiastical law. Near the end of the eleventh century, however, the enthusiasm of the Crusades whetted anew the turbulent appetite of the Christian barons, and led these lords of western Europe, with their belligerent spirits, to the East, as a result of which, people hitherto oppressed could breathe more freely. A few States recovered their independence; some semblance of law was established; municipal institutions were organized; and establishments consecrated to public use were founded and multiplied; finally in the course of the thirteenth and fourteenth centuries the cloud which covered the face of Roman Catholic Europe was in some measure dispersed, and men of talent, and even genius, began to appear upon the scene; everything about them being so obscure, they shone like stars in the firmament. In letters, for instance, there were Dante, Petrarch, Boccaccio; in mathematics, Leonard of Pisa, the first in Europe to understand and employ figures and algebraic characters, although Cuvier has claimed this distinction for Gerbert, a Benedictine monk of the tenth century, who subsequently became Pope Sylvester II. At this time, although in scholastic estimation medicine, theology and philosophy alone were fit to entertain the human mind, the natural sciences were not without occasional representatives. Roger Bacon was three centuries in advance of scientific reform, and endeavored to introduce experimental philosophy, and so fully convinced some of his auditors that they subscribed £2,000 sterling to provide for the expense

of his experiments; this was money most happily employed, since it made possible a number of important discoveries. It is said that Bacon knew the properties of convex and concave lenses, and was the first to conceive of the microscope and telescope; his astronomical knowledge led him to demand a reform in the calendar, which Gregory XIII. carried out three centuries later; he had knowledge of gunpowder and its effects, and was in fact the wizard of his day; but his boldness and originality drew upon him the enmity of the church, by which he was persecuted and finally condemned to imprisonment for life upon a diet of bread and water, although he was ultimately released, in 1266, by Pope Clement IV. He wrote extensively, but only fragments of his works exist, since the friars believed them tainted with witchcraft and prevented their publication.

Before and during the time of Roger Bacon the philosophers were divided into two parties, which engaged in very unseemly and unphilosophic strife. One was termed the *Realist*, and believed with Plato that ideas are self-existent and independent of the mind, in other words veritable entities: The other, the *Nominalist*, held with Aristotle that general ideas are pure abstractions formed by the mind with the aid of sensations received from without, without which they could never exist—that is, if a being could be imagined without sensibilities and the power of sensation, such being would be destitute of ideas. These two parties kept up a very active warfare and enlisted the aid of both civil and ecclesiastical authorities, the result being persecution of each other and that general unsatisfactory conflict into which theology and metaphysical speculation always force those who indulge in them.

Now regarding the condition of medical affairs in the Empire of the West: Down to the seventh century, in Rome, there were court archiaters who were attached to the retinues of the nobles, and in each large city popular archiaters formed a college charged with sanitary matters, the instruction and examination of candidates, and gratuitous services to the poor. Although there is little definite information available, it is probable that after the ruin of Alexandria much the same medical organization obtained in those provinces as continued under the Greek Empire at Constantinople. Under Arab sway we know very little of what rules or regulations governed instruction in medicine and its practice; and so soon as one of these countries fell under the rule of the Turks, all scientific institutions seem to have decayed or been discontinued—or, as Renouard states it: "If we may judge by what still exists today in this unfortunate country (Turkey), consumed by the power of ignorance and despotism, the most complete anarchy followed all older organizations."

In southern Europe, however, things had not gone on quite so badly, although at first barbarous invasion caused everywhere disorder and confusion, and the Christian States of the Western Empire yet presented after three or four centuries a chaotic condition of affairs. The ecclesiastical schools, which were under the care of the church, still pursued courses of literary and scientific instruction; in the time of Charlemagne, for instance, the colleges of the cathedrals, and even some of the monasteries, taught medicine in a very limited way under the name of physics. — Thus all the liberal professions, that of medicine included, fell under the domination of the clergy, and priests, abbots and bishops became court physicians. The monks of Mount Cassin, of the order of St. Benoit, enjoyed for a long time a great reputation for medical skill; and among these in the tenth century was an abbot named *Berthier Didier*, who became Pope Victor III. towards the close of the eleventh century, and one *Constantine*, surnamed the African. Of the ecclesiastics who from the ninth to the eleventh century were distinguished by the knowledge of medicine, there were Hugues, abbot of St. Denis, physician to the king of France; Didon, abbot of Sens; Sigoal, abbot of Epernay; Archbishop Milo, etc. Even several religious orders of women undertook, to a certain extent, the practice of medicine, and Hildegarde, who was abbess of the convent of Rupertsburg, near Bingen, is credited with having written a treatise on materia medica.

From the ninth to the thirteenth century the Jews shared with the clergy the monopoly of the healing art. Many of these studied under Arabian physicians, and though the canons of the church forbade them to in any

way minister to the ailments of Christians, they were still called upon in time of need, and even in many instances had access to the palaces of archbishops, cardinals, and popes.

The education of Christian priests and infidel practitioners embraced really very little, and consisted for the most part of knowledge of a few symptoms and possession of a few receipts; books were excessively rare and expensive, capable teachers lacking, and a good medical education out of the question. There was no law nor public regulation which concerned the practice of medicine, and any who desired could enter upon it; and besides the priests and the Jews—which latter stood at the top of the scale—there was a multitude of charlatans of the lowest order, such as barbers, keepers of baths, and even a few women. The morality of this vulgar herd was on a level with its knowledge. I have said the practice of medicine was not regulated by law, yet Theodoric, King of the Visigoths, enacted a statute that no physician should bleed a woman of noble birth without the assistance of a relative or domestic; that if a physician in treating a patient or dressing a wound happened to harm a gentleman he should pay a forfeit of 100 sous, and if the patient died from the operation he should be handed over to the relatives of the deceased, who could do with him whatever they pleased; but if he crippled or caused the death of a serf, he was to be held accountable only for the loss, and compelled to supply another—this remained in force from the sixth to the twelfth century, and was made to apply chiefly to the practice of surgery, which had been abandoned to individuals of the lowest condition. The practice of internal medicine was for the principal part the privilege of the clergy, and it is not likely the secular power ever expected that one protected with the title of priest should be handed over to the relatives of the dead. It furthermore appears that the practice of medicine as divorced from surgery led to such irregularities in the manners and conduct of the clergy that from the twelfth century popes and councils of the church repeatedly forbade the medical art to those in holy orders or under vows; but that this prohibition was often violated is shown by the frequent reiteration of inhibitory laws.

During the twelfth century the secular authority also was affected by abuses. Roger, founder of the kingdom of Sicily, one of the first Christian princes of the Middle Ages, gave special attention thereto, and in 1140 proclaimed that every one who wished to practice medicine must present himself before a magistrate and obtain authorization, under pain of imprisonment and confiscation of goods. Other sovereigns followed this example, and regulating ordinances were gradually established, which ultimately led to the institution of medical faculties and university degrees.

During the Middle Ages, in the Empire of the West, arose the School of Salernum, which became so celebrated that, like that of Alexandria, it deserves special mention. The modern city of Salerno is situate on the Neapolitan Gulf, about thirty miles southeast of the city of Naples, with a population of but a few thousand souls. The ancient city stood upon a height in the rear of the present town, where the ruins of its mediæval citadel are still to be seen. It first appeared in history 194 B.C., when a Roman colony was founded; was a municipal town of importance, and appears even at this early day to have been a health resort, since Horace informs us he had been advised to substitute its cool baths for the warm ones of Baiæ. During the stormy centuries following the downfall of the Western Empire, Salerno successively submitted to the sway of the Goths, Lombards, Franks, Saracens, and Greeks, as the vicissitudes of war compelled. Under the Lombards it became the residence of the Duke of Beneventum, and in 1075, when taken by Robert Guiscard of Normandy, it fell to the crown of Naples—in consequence of which, in the fourteenth century, the heir apparent of this kingdom took the title of Prince of Salernum.

During the Middle Ages here flourished a medical school, important not alone because of its celebrity at the time, but for its effect upon the medical history of the future. Its origin is obscure, though it has been ascribed to Charlemagne in 802; again, its founding has been held to be the work of fugitives from Alexandria when that city was captured by the Saracens, 640 A.D.; some attribute it to the Benedictine order of monks, others to

Saracens, etc. The foundation by Alexandrian fugitives is probably conjectural, yet it must be admitted there is some evidence of knowledge of Arabian medicine in Salernum as early as this. Be the origin what it may, it is certain the Benedictine monks exercised a very important influence upon this school, and there is considerable reason to think it was really originated by them. Their monastery of Monte Casino was located about fifty miles the other side of Naples, occupying the site of an ancient temple of Apollo; the rules of the order enjoined the care of the sick and treatment by prayer, and St. Benedict himself was credited with performing miraculous cures. The rules which forbade public instruction were gradually discarded, for in the ninth century Abbot Bertharius wrote two books on the art of healing, and by the tenth century Monte Casino had acquired great reputation as a medical school and was sought by medically inclined monks from all quarters. A little later (1022) King Henry II. of Bavaria, Emperor of Germany, is said to have been cut for stone by St. Benedict himself, who appeared in ghostly form and operated with such skill that on awaking the royal patient found the calculus in his hand, and only the cicatrix of the wound through which it had been removed. Of course the grateful Emperor could do no less than richly endow the monastery and bestow upon it additional privileges.

Desiderius, the Benedictine abbot from 1058 to 1086, and in the eleventh century promoted to the papal chair under the title of Victor III., was distinguished for his attainments in medicine and in music, and founded a new hospital in connection with the monastery; he also composed four books detailing the miraculous cures wrought by his patron saint. It was really within this monastery that Constantine the African, one of the most learned men and the most famous Christian physician of his time, compiled his numerous medical treatises.

About Constantine there is much of romance. He was born in Carthage in 1018, and died in 1085. He visited all the prominent schools of his day in Egypt, Bagdad, Babylon, and even India, and for thirty-nine years pursued the various branches of knowledge away from home. Returning to Carthage, misunderstood and feared, he was accused of practicing sorcery and compelled to fly to save his life. Disguised as a beggar he escaped to Salernum, which had been recently captured by Robert Guiscard, and on the recommendation of some royal visitor, who had known him at another court, he was made private secretary to Guiscard. His new duties soon became irksome, however, and he retired to a cloister to devote himself to literary labors. These for the most part were translations of Greek and Arabic writings, often made *verbatim* and without credit. Whatever may be said about this lack of honesty, and the barbaric nature of his Latin, credit must be given him for reviving the study of Hippocrates and Galen in France; and he is generally credited with being the first to introduce into Europe knowledge of Arabian medicine.

From Monte Casino the Benedictines at an early day spread to Salernum, where by the middle of the tenth century three monasteries were established, in all of which were kept holy relics. It now appears that, although there may have been some previous institution of learning at this point, and possibly even medical teachers, the real organization of a regular school of medicine was due to the Benedictines. In the annals of Naples of the middle of the ninth century, the names of Salernian physicians are mentioned; and it is known that toward the close of the tenth century Archbishop Verdun visited Salernum for relief from vesical calculus, and there died. A century later an elder son of Robert Guiscard was there treated for a wound received in fighting the Greeks.

The earliest medical writings of this school which have been preserved are found in the *Compendium Salernitanum*, discovered in manuscript form in 1837; and among the more prominent authors quoted are: *Petronius*, who wrote about 1035; *Gariopontus*, who wrote about 1040; *Bartholomæus*, *Ferrarius*, and *Afflacius*—the latter a disciple of Constantinus Africanus.

The preaching of Peter the Hermit, which marked the close of the eleventh century, was followed by an outburst of crusading enthusiasm that quickly converted Europe into a vast camp, and Salernum, being situated

upon the high road to the East, was benefited in no small degree, and its reputation as a medical school materially enhanced; likewise its teachers gained in experience as regards military surgery. In this way it became a favorite resort for Crusaders when disabled, wounded, or diseased. Robert of Normandy, son of the Conqueror, returning from the Holy Land, remained here for some time with a poisoned wound in the arm, received in 1097 at the siege of Jerusalem, and it was decided it could be healed only by sucking out the poison, a process deemed dangerous to the operator. History declares that Robert's wife, daughter of Geoffrey, Earl of Conversana, being denied permission, took advantage of her husband's unconsciousness during sleep to withdraw the poison, when the wound speedily healed. At the time of the departure of Robert, hastened by the death of his brother William, John of Milan, the then chief of the medical school, presented him with the famous *Regimen Sanitatis Salerni*, said to have been composed largely for Robert's benefit. This was a Latin poem that enjoyed most unexampled popularity for many generations, and was the *vade mecum* of well educated physicians for centuries. It is said to have passed through 240 different editions, and that more than one hundred manuscript copies are to-day to be found in various European libraries. The latest English version was published by Professor Ordronaux in 1871—a sample is here submitted:

" Salerno's school in conclave high unites
To counsel England's king; and thus indites:
If thou to health and vigor would'st attain,
Shun mighty cares, all anger deem profane;
From heavy suppers and much wine abstain;
Nor trivial count it after pompous fare
To rise from table and to take the air.
Shun idle noonday slumbers, nor delay
The urgent calls of nature to obey.
These rules if thou wilt follow to the end,
Thy life to greater length thou may'st extend."

During the twelfth and thirteenth centuries the glory of the School of Salerno reached its zenith; it was the most famous school of medicine in Europe, and was fostered by various kings. The celebrated Jew, Benjamin of Tudela, traveling from Spain to India, visited Salernum in 1164 and called it the "principal university of Christendom." Early in the twelfth century flourished Cophon, Archimatheus, and Nicholas surnamed Praepositus, all of whom were distinguished teachers. The latter published a work known as "*Antidotarium*," which was for several centuries the standard pharmacopœia, and which contained a table of weights that correspond very closely to those of the modern apothecary. The younger Cophon, who has been confounded with his father (as both seem to have written extensively), wrote two treatises, one on the anatomy of the hog, the other entitled "*Ars Medendi*." The first is interesting as the only anatomical treatise of this school which has been preserved, and is an index of the degradation of anatomical science of that time.

The names of John and Matthew Platearius are of frequent occurrence in the records of this school, and have given rise to considerable confusion. The former is supposed to have been the husband of Trotula, a female physician of whom I shall have more to say later.

Bernard the Provincial, who seems to have escaped the notice of most historians, wrote about 1155, and his commentary offers much interesting information concerning the therapeutics of the day; he formulated a large number of recipes to enable the sick to escape the omnipotence of the apothecaries, and recommended wine for the delicate stomachs of the more exalted of the clergy, and inasmuch as these stomachs did not bear medicine well, he directed, in accordance with the practice of Archbishop Ælfanus, that emetics should be prescribed *after* meals, when their action is less injurious and more agreeable; he advised young men and women tormented with love which they could not gratify, to tie their hands behind their backs, and drink water from a vessel in which a red-hot iron had been cooled.—Indeed, his work is full of curious information and advice, and is not without therapeutic interest.

A name which figures largely in the history of this school is that of Magister Salernus, about which there is great uncertainty; it is not positively known whether this refers to a particular person or is a generic name covering various individuals. The name has been mentioned as that of one of the four reputed founders of the school; it is positive there

are certain treatises which bear this name—which gives an appearance of authenticity to it as an individual title.

In the latter half of the twelfth century lived John of St. Paul, one of the teachers of Gilbert the Englishman; also Musandinus, who left a curious treatise on dietetics; and Urso, who wrote on the pulse and on the urine. Here in 1190 resided and studied a certain Alcadinus from Syracuse, whose knowledge of philosophy and medicine was such that he acquired great reputation and was made a professor; he even composed Latin medical poems.

Just at the close of this century flourished Ægidius, who studied at Salernum, and also at Montpellier where a school of medicine had been founded in 1180; he was physician to Philip Augustus of France, and became professor in the University of Paris. Three treatises, all in Latin hexameter, are ascribed to him. A contemporary was Johanes Rogeriis of Palermo, a graduate of Salernum and author of several works.

Early in the thirteenth century flourished Roger of Parma, one of the most distinguished of the alumni of this school, and the earliest pioneer in modern surgery — his work on this topic, familiarly known as *Rogeriana*, enjoyed the greatest reputation in its day and was for a long time the surgical text-book of Italy; his predilection for poultices and moist dressings in the treatment of wounds, abscesses and ulcers became, in the hands of his successors, the distinguishing feature of the surgery of Salernum in opposition to the school at Bologna, where Hugo Di Lucca and Theodoric (his great rival) contended for the superiority of the dry treatment. Roger was also the first to use the term *seton* and to give practical demonstration to this means of derivation.

Roland of Parma, a pupil of Roger, and a surgeon of great distinction, became professor at Bologna and wrote a treatise on surgery which was for the most part a commentary on the works of his master. The treatise of Roger and that of Roland furnished the basis for a work entitled "*The Treatise of the Four Masters*," supposed to have been written about 1270, and manuscripts of which have been long known in various European libraries. It is divided into four books, displays no little surgical ability, and from its title would appear to have been the joint composition of four teachers; indeed, it was long attributed to Archimatheus, Platearius, Petro Cellus, and Afflacius, though it is now pretty generally understood it was the product of but a single pen and its author most likely a Frenchman. The ascription of authorship to four masters was probably for the purpose of increasing its weight and authority, and it constituted a reliable exposition of the surgery of Salernum in its day. It is quoted quite freely by Guy de Chauliac, who was the restorer of French surgery in the fourteenth century, and occasionally by later writers.

Another of the distinguished Salernian physicians of the thirteenth century, one highly esteemed by Frederick II., was John of Procida, who also was active in producing—if not the real author of—the Massacre of the Sicilian Vespers, A.D. 1282. In a dispute concerning the question of the two Sicilies he embraced the cause of Prince Manfred, for which he was banished by Charles of Anjou, and took refuge at the court of Peter III. of Arragon, by whom he was created a baron; and he was influential in persuading the latter to assert his claim to the throne of Sicily. By various intrigues at different courts he succeeded in organizing an alliance, which betrayed its existence in this massacre and finally resulted in the overthrow of the French in Sicily and the transfer of the Island to the crown of Spain. He was author of at least two treatises devoted to medicine and philosophy.

Other writers of the School of Salernum were: a learned Jew of Agrigentum known as "Farragus;" Matthew Sylvaticus; Graphæus; and Cappola. About the middle of the fifteenth century flourished Saladino, famous as an authority on materia medica.

It is of no small interest that now, for the first time in history, women began to figure somewhat prominently as writers, practitioners, and even teachers of medicine. About the middle of the eleventh century appeared a work entitled "*De Mulierium Passionibus*," attributed to the before-mentioned Trotula, wife of John Platearius, which has descended even to these days. There is nothing in the work to indicate the name or sex of the

author, who is invariably spoken of in the third person, consequently Trotula's connection therewith has often been disputed. It mentions a certain "*aqua mirabilis*," composed largely of brandy, which spirit is said to have first been employed medicinally by Thaddeus of Florence, who died in 1295; there is also an account of a patient who *wore spectacles!* The diseases of women and children are also largely dealt with. The work is undoubtedly an anonymous production of the eleventh century, disfigured by additions of a later day, and ascribed to Trotula, perhaps because of the celebrity that attached to her; at all events it is the earliest work ascribed to a female physician, and thus possesses special claims to interest.

Later we read of Sichelguada, wife of Robert Guiscard and a graduate of Salernum, who endeavored to poison her stepson Bohemond in order to secure the succession of her own child. This infamous plot was furthered by some of the Salernian physicians, and thwarted only by the prompt action of Guiscard, who swore he would slay his wife with his own sword should the malady of Bohemond prove fatal.

Certain other female physicians of this period are mentioned, notably Abella, who, in spite of the modesty that is supposed to hedge about her sex, produced in Latin hexameter a work entitled "*De Natura Seminis Hominis.*" Mercuriolus in the fifteenth century produced treatises on the cure of wounds, pestilent fevers, and on the nails. The most celebrated of all, however, appears to have been Calenda, who lived during the reign of that notorious profligate John II. of Naples (1414–1435), and was particularly distinguished for her personal attractions. She graduated with great honor from the school at Salernum, and soon after, in 1423, married a nobleman of the court, which perhaps accounts for the fact she never exercised the privilege of authorship. A little later, Marguerite of Sicily or Naples, also a Salernian graduate, acquired an extended professional reputation, and was licensed to practice by Ladislaus, King of Poland.

Daremberg informs us there were numerous female physicians at Salernum, much sought after because of their talents, and moreover highly esteemed by the professors of the school who freely quoted the writings of their fair pupils and contemporaries; further, that they employed ointments in paralyses, fumigations, vapors and antimony for coughs, and lotions of aloe and rose-water for swellings of the face; they combined scientific knowledge with facetious playfulness in a manner peculiar to the sex, in that they tendered unsuspecting beaux bouquets of roses doctored with powdered euphorbium, and hugely enjoyed the forced sternutations of their victims.

It will thus be seen what a widespread and long continued influence the School of Salernum exerted. At first physics and philosophy were the principal branches taught, but later the other sciences were cultivated. The Emperor Frederick II. united the different schools of the city into a university—a term, however, that, as then applied, appears to have corresponded to what in the nineteenth century is understood by *corporation.* The Emperor likewise published several decrees which revised the duties and privileges of practitioners of medicine and surgery in his kingdom, and, in 1224, ordered that no person should practice within the two Sicilies until examined by the faculty of the university and licensed at the royal hands; further, practitioners were compelled to devote at least one year to the study of anatomy.—The faculty at this time consisted of ten professors, whose salary probably depended upon the number of pupils. A candidate for graduation was required to present proof of majority, of legitimacy of birth, and of proper duration of preliminary study, and then was examined publicly in the Synopsis of Galen, the Aphorisms of Hippocrates, or the Canon of Avicenna. On passing he swore to conform to all the regulations hitherto observed in medicine, to give gratuitous treatment to the poor, and to expose all apothecaries detected in adulterating drugs. A book was then placed in his hands, a ring upon his finger, and a laurel crown upon his head, when he was "dismissed with a kiss." The degree conferred was that of "*Magister*," the modern title of *Doctor*—at that period employed almost exclusively to designate a public teacher or professor.

But the watchfulness of King Frederick was not confined to the regulation of medical

study within his kingdom. The number of professional visits, and the recompense therefor, were fixed by law. Every physician was compelled to visit his patients twice daily, and even once at night as well if summoned, and for this attendance was permitted a daily fee equivalent to 14 cents for patients within the city, while for calls without the city the largest legal charge was $1.13, provided he paid his own expenses.

The earlier teachings and practice of Salernum were a curious mixture of methodism, dogmatism, and superstition. The latter may be better understood when it is recalled that the practice of medicine for an extended period was confined almost exclusively to ecclesiastics, who by their very education were prone to superstition and upheld the efficacy of charms and relics, and the active intervention of saints and martyrs as well as the myrmidons of evil; hence arose many of the conflicts and absurd notions peculiar to the period. The prevalence of the doctrine of medical methodism was due to the character of the writings most accessible to students of that day, such as of Cœlius Aurelianus and others; and it is curious that Celsus, the most elegant of medical authors, was never popular among medical monks. The Hellenic language having almost disappeared from Italy by the sixth century, the works of the Greek authors had become a sealed book to a vast majority, even of the better educated, hence the purer sources of medical knowledge were not available. Although the School of Salernum at a later date prided itself upon its devotion to the "Father of Medicine," the Hippocratic writings were not known at this period; and when Constantine the African, by the translation of Arabic works, introduced a new element into the Salernian school, he engrafted upon its medical teaching a form of doctrine which found a congenial atmosphere in which it throve vigorously; while a century later the translations of Gerard of Cremona gave a stronger impulse to the growth of Hippocratic medicine than to Hippocratic doctrine.

From the "*Commentary of the Four Masters*" we learn that Salernian practitioners recognized the diagnostic importance of nausea, vomiting, and the flow of blood from the ears in injuries to the head; that they resorted to the trepan for depressed fractures and the relief of intra-cranial extravasation; that hernia cerebri was treated by pressure and caustics; that ligatures, both above and below the opening, were applied for the treatment of wounds of the carotid arteries and jugular veins. It was advised to decline patients suffering from wounds of the heart, lungs, diaphragm, stomach, or liver, in order to avoid the disgrace of losing them; and in penetrating wounds of the intestines and those complicated with protrusion of the wounded gut, instruction was given how to envelop them in the warm abdomen of a slaughtered animal until natural color and temperature were restored, and then to insert a cannula of alder-wood into the wounded intestine, which was to be neatly closed and stitched; finally the protrusion was to be carefully washed with warm water and returned into the abdominal cavity, enlarging the opening for this purpose if necessary. Also was advised the extraction of diseased teeth; and the operation of lithotomy was described with considerable care. Compound fractures were to be treated with splints. On the whole this commentary of the alleged Four Masters is the most interesting and ancient Salernian work which has been preserved, and is well worthy the attention of even modern surgeons.

Such was the School of Salernum in its prime, during the twelfth and thirteenth centuries. My readers will not have failed to note how few names have been mentioned which are prominent in medical history, and how few improvements were made in medical art by those who have been mentioned. One naturally inquires, then, what was the source of the widespread fame of Salerno as a school, since it was distinguished neither by notable discovery in science nor by celebrated teachers, and the predominant element was doubtless one of obstinate conservatism and unswerving devotion to ancient doctrines. Founded during the dark period of the Middle Ages, at a time when ignorance, bigotry and superstition prevailed, it preserved amidst the gloom that had settled upon Europe a few rays of that intellectual light which had shone so brightly in the golden ages of Roman history. These rays, made more conspicuous by the intellectual night which they barely

illumined, were a beacon for men who were groping for more light. Thus the name of Salernum became synonymous with intellectual advancement in later ages. As the parent and model of our modern university system, Salernum yet deserves, in a measure, to enjoy the esteem of a numerous scholastic offspring. At a time when priests were particularly active in passing off rudimentary knowledge for the science of healing, this school began to secure all information possible from the laity for the progressive development of medicine. It began, in other words, to hold aloof, and then to break away from the fetters of a fanatical church. The decline, too, was as rapid as its career had been brilliant. One very serious blow was struck when, in 1224, Frederick II. founded the University of Naples and forbade Neapolitan subjects to seek instruction at any other university. The next year a revolt in the city provoked the closure of the schools of Bologna, which were, however, opened again two years later. Within a short time the universities of Naples, Montpellier, Padua, Paris and Bologna all entered into a contest for preëminence with a rivalry which was not always generous; in 1224, it is said, the latter university had no less than 10,000 students. Happily, however, the period of the Renaissance proved to be one of emancipation from the fetters of ignorance and superstition, and an appeal for liberty which the conservatism of Salernum could not brook. Roger Bacon in England, Lanfranc and Guy de Chauliac in France, Mondino at Bologna, Savonarola at Padua, found no rivals at Salernum to successfully contest their fame. Thus this ancient school fell behind the age, and in a short time sank into a mediocrity which was scarcely brightened by the reflection of a departed glory. In 1342 Robert I. renewed the decree of Frederick II. which closed all the schools in his kingdom, save those of Naples, but excepted Salernum solely because of its antiquity and the traditions of his predecessors. In 1413 King Ladislaus excepted the Salernian alumni and professors from all taxes, duties, and tribute. In the middle of the fourteenth century the poet Petrarch speaks of the school as a memory of the past; but its last appearance was in 1748, when a dispute at Paris relating to the rank of physicians and surgeons was referred to its university for arbitration and final decision. In 1811 a formal decree reduced this parent of all European universities to a mere gymnasium or preparatory school; and now one may wander through the streets of the modern town and among the ruins of its ancient predecessor, and seek in vain to trace some reminder of those who were illustrious during some of the most terrible ages in the world's history. No echo of tradition, no stone of ancient edifice, no library preserving precious manuscripts, not even an edition of the old Salernian regimen, in the whole city; in fact, none now so poor as to do it reverence.

(*To be continued.*)

WHAT PATIENTS SHOULD BE COMMITTED TO THE ASYLUM, AND WHEN?

BY E. A. CHRISTIAN, M.D.

The points which arrest attention in considering this question attach themselves so equally to each branch of the interrogatory that it seems wise to treat the queries as one. The decision as to the sanity or the insanity of the individual, as to the form of mental alienation which the disease assumes if he is insane, and the further question of when it is wisest to commit to the hospital or asylum, rest for decision, in many instances, upon considerations which cannot be eliminated from any one of the questions. Once granted that the individual is insane and suffering from some special form of disease, then the propriety of his commitment may follow with logical and impelling conclusiveness. I bring to the subject also the question of diagnosis, because I feel the majority of physicians are lacking in sufficient knowledge of mental diseases to make such scientifically, especially in instances where doubt calls for refinement and accuracy of observation.—I make this statement in no disparagement of individuals, but as applicable to the profession in general, though perhaps less so now than formerly, since greater attention is given to these subjects in college curriculums. My experience is, the family physician is far more apt to err in refusing certificates of insanity where such would with greater propriety be granted, than in assisting in the commitment of individuals

not properly subjects for asylum custody or care.

Considerations which decide these questions are: Those which concern the individual himself: those which concern his friends: and those which concern the public.

It may be asserted as a general proposition, that the chances of the patient for improvement are better with early resort to asylum treatment—not that asylum treatment in its medical features may be different or more skillfully applied than that afforded to the patient at home, but because it may be more systematically and surely directed, and because of the advantages derived in psychological channels from change of associations. The treatment of mental disorders in their incipiency is an advantage not often afforded to asylums, and the reception of such cases brings to the asylum physician a feeling of hopefulness for the future not inspired by the majority of annual admissions.—I refer particularly to the class of cases presumably curable, organic changes being absent.

I would not lay the fault of tardy commitments altogether at the doors of family physicians, for I recognize that such are often contending against the scruples of friends and the opposition of the patients; still there are cases where the only opposition is the hesitancy of the physician to certify the patient is actually insane. The patient may talk freely of himself; may describe his symptoms clearly, and not the less accurately because they are, perhaps, all subjective; may attend to his business, perhaps, though always with failing or faulty powers of application. He is not lacking in proper appreciation of his relations to others, or of a due sense of responsibility for his acts; may not objectively seem out of harmony with his environment, and — what is most troublesome to the examining physician— may not present any delusions. Certainly it would be difficult to pronounce such a man insane, and I am not disposed to find fault if he were not so pronounced provided there had been no previous attack of mental disturbance by which the physician might be guided; nevertheless, such persons may be, and often are, insane and imperatively in need of the assistance which can be afforded only in an insane retreat.

A former patient recently consulted me for symptoms such as, a number of years before, had ushered in an acute attack of melancholia unaccompanied by delusions. He wished to anticipate and abort the attack which he felt sure was destined to come, and to be received as a voluntary patient because of the difficulty which would be encountered in securing certificates of insanity from physicians and an order for commitment from the court. To wait for the advent of delusions before being satisfied of the existence of mental disease may not only prejudice the patient's chances for the future, but in some cases injure the comfort and safety of others. Insanity may, and not infrequently does, exist without delusions, the morbid state manifesting itself, not in disordered preception and faulty judgments, but in disturbances of the common sensations upon which, we are taught, the personality of the individual hinges, — the normal ebb and flow of spirits having given place to an unhealthy depression beyond the patient's power to control. Patients of this class are the more unfortunate and especially deserving of sympathy, in that their condition is so little understood and receives so little consideration from people in general.

I would not advise the commitment of such where the indications are not positive; but oftentimes timely advice from the physician may be of great service in strengthening half-formed intentions of the patient. It is mistaken economy to permit a man who is insane to remain at home so long as he may be able to contribute to the support of his family or self, since for every *month* that is thus saved to his family or to the county, *years* may accrue in which he will be a charge upon the public. Of the total admissions to the Eastern Michigan Asylum, over 62 per cent. were committed after the disease had been in existence two years and upwards; only about 34 per cent. where the malady had been less than nine months in existence. Is it surprising then that only about 21 per cent. make good recoveries?

I do not wish to dwell at any length upon the considerations which concern friends, but merely to emphasize what must have forcefully presented itself to all when confronted with certain forms of mental decay, viz.:

That grave harm may result to other people than the patient. The evil effects of daily association of a family with an insane person, and especially upon the younger and more impressionable members, are not sufficiently considered. The mental health of a household as a whole receives a taint from this bit of unhealthy ferment, and individuals are warped or stunted in their mental or moral development. And this is not all: The continued care of an insane person has a deleterious influence upon the strength and health of those ministering to him, and loss of physical energies leading to breaking-down not infrequently ensues. The unselfish devotion in ministering to the exactions of an aged parent or grandparent whose mental faculties are lost from senile decay, may be morally beautiful, but likewise may lead to disastrous consequences in those whose energies should be conserved for others.—I have known such servitude to be followed by insanity. Unfortunately the asylums are not able to afford relief as fast as demands are made upon them, but I feel that no sentiment should deter friends of the patient, or the attending physician, from exerting every effort to secure institutional care for this class of insane.

Regarding considerations which concern the public: Americans are proverbially a long-suffering people as regards those evils which are general and affect all more or less alike; the common nuisance, in whatever form manifested, is apt to be tolerated long after the individual has disposed of that which torments him alone. The crank thrives in this country as he does nowhere else; and long after he is entirely out of harmony with his environment, when his ideas and conclusions are at variance with rational human experience and incompatible with public expediency, he is tolerated, until the community is at length startled by an unusual extravagance or crime that forces measures for his restraint—too often only after the innocent have suffered. Physicians should so familiarize themselves with the literature of such abnormal mental manifestations as are typified in paranoia, that they may be in position to recognize the Guiteaus and the Prendergasts, and lend their influence to the sequestration of such before the pistol is fired or the bomb thrown.

I will illustrate by a case the indifference with which the public treats those unfortunates who, while suffering themselves, are at the same time a menace to others:

The individual in question had been under treatment in the Asylum. At the request of his wife he was sent home, improved but not regarded as recovered. Subsequently for two and a half years he was able to work when work was to be had. At infrequent intervals letters came from his wife and from the patient himself, asking for advice and treatment; he was still self-conscious of mental disorder, which he explained in an irrational manner, but was unwilling to be committed regularly, desiring to return as a voluntary patient. One day he appeared at the Asylum, foot-sore and dirty, having walked all the way from Detroit to interview the superintendent, who, he believed, could if he would rid him of his burden. It took careful, delicate and persistent questioning to elicit a statement of symptoms, and then to draw out his own explanation thereof.—It is not my purpose to detail these symptoms, many and interesting as they were.

When asked why he had come, and what he expected the superintendent to do, he replied: "That is for you to decide." He did not want medicine now, nor institution care; but with earnestness, as though he must finally unburden himself, he went on to say there were various people, some his fellow-workmen, some in the "marine service," some in the "criminal service," others in the "postal service" ("all federal office-holders"), who used his brain too much; they had deprived him of individuality, sending him here and there against his will, using his mind as a medium for conveying information from one to another. This lost individuality he desired should be restored. These people had been working upon his intellect too much, and "it must be stopped." He had been to the United States District Attorney to complain, and, deeming him a harmless crank, the people in the office had good-naturedly promised to consider his complaints; but the persecutions still went on. He did not mind being thus involuntarily utilized for the benefit of his fellow-workmen if they were poor and needed help, but did object to being made an instrument of advantage for

government officials; at times he felt like taking matters into his own hands and clubbing someone.

This man was and is a dangerous lunatic. I wrote his wife and a gentleman interested in him, setting forth the dangers attending his being at large; but he is still at large, presumably because the main support of his family. He may never do any harm,—but what of the possibilities?

Time will not permit discussing more than a few of the points raised by the question: What patients to send to the asylum, and when? But I may pertinently touch upon some of the governing principles:

An individual who fears the advent of mental disturbance is at the earliest moment entitled to the asylum observation and care for which he asks, if the physician can consistently recommend such:

An insane person, whether suffering from senile insanity, from attacks of epileptic confusion, from hypochondriacal melancholia, or from any other form of mental perturbation, even such as are ordinarily regarded as harmless, but whose care involves wear and tear upon the household, and whose residence at home is persistently detrimental to the development of the younger members thereof, should most certainly have asylum care:

An individual whose continued eccentricities, based upon mental perturbation, make of him a dangerous person, or in any way a nuisance, should be restrained for the benefit of society:

The presence of actual delusions is not necessary for the diagnosis of insanity:

Finally, in all cases where doubt as to the existence of mental disorder exists in the mind of the family physician, I know of no more simple evidence than "*A prolonged departure from the individual's normal standard of feeling, thinking, and acting.*"

Pontiac, Michigan.

SYMPATHETIC OPHTHALMIA.

BY L. E. MAIRE, M.D.

Sympathetic ophthalmia is induced by pre-existing inflammation in the fellow eye, and the onset thereof may be violent and painful or—as is sometimes the case—insidious in character, coming on slowly and stealthily, until the patient, ignorant of the danger, finds himself hopelessly blind; hence the importance of an early recognition of the prodromal stage of sympathetic inflammation cannot be too strongly set forth. The physician should anxiously watch the progress of an inflammation in an old phthisical, useless, or (especially) recently injured eye containing a foreign body or a wound in the neighborhood of the ciliary region. It is his duty to acquaint the patient with the danger of such inflammations and injuries as regards the sound eye, so that on the occurrence of the slightest sympathetic irritation he may have the benefit of prompt treatment.

The prodrome is generally well marked, consisting of intolerance or fear of light, suffusion of tears, occasional pain, weakness of accommodation, and more or less congestion. When the disease is well established, these symptoms are exaggerated.

Foreign bodies within the eye, especially within the iris-ciliary region; wounds of the eyeball, particularly in the region of the ciliary body; atrophy of ball resulting from wounds or inflammatory changes; and occasionally, as a result of inflammatory changes in the choroid, ossification of its structure: such are the common causes of sympathetic ophthalmia. The existence of osseous deposits within the choroid will frequently cause sympathetic irritation and, if neglected, sympathetic inflammation. Incarceration of iris tissue in the corneal wound, by constant dragging also becomes a source of danger. Luxation of the lens and swelling of the lens substance, due to traumatism, occasionally, by pressure on the iris and ciliary body, will set up a severe reaction; also intra-ocular tumors act in a similar manner. Generally sympathetic ophthalmia need not be apprehended in phthisis corneæ due to suppuration, in staphyloma, glaucoma absolutum, or phthisis of the eyeball following an attack of panophthalmitis. It is a curious fact that the starting-point of the disease, as well as its culmination, is in the offending eye, and that it appears first as an irido-cyclitis; in other words, the disease commences with an irido-cyclitis in the first eye and ends with the same disease in the second.

The pathological changes that take place may be divided into those affecting the iris and ciliary body directly, in the form of a plastic inflammation, and those affecting these tissues as a serous exudate; and occasionally is met a third variety, first affecting the optic nerve, and in succession the retina, choroid, ciliary body, iris, and finally the vitreous and lens; this variety, as the result of personal observation, I am inclined to classify as a sero-plastic change.

It will be seen that no matter where the first sympathetic change originates, it ultimately and invariably affects the iris-ciliary region and culminates as an irido-cyclitis. The inflammatory changes may be rapid or chronic, rapidity depending more or less upon the character of the exudate. If the latter is plastic, the course will be brief, apparently spending its full force upon the iris and ciliary body—these delicate tissues, as well as those surrounding, will be destroyed by an excessive plastic exudate, and the ravages finally involve the tissues of the eye back of the iris, resulting of course in complete loss of vision. In cases marked by a less active reaction and distinguished by serous or sero-plastic exudate, loss of vision is not so complete though always compromised.—A patient suffering from this variety of sympathetic ophthalmia, who still possesses sufficient vision to be able to move about comfortably, should consider himself fortunate. In some cases the disease may manifest itself by repeated attacks, each increased in severity and effect upon vision, until total blindness results.

The query is often propounded: At what time during an irido-cyclitis is an injured eye most liable to induce sympathetic disease in its fellow? Experience teaches such is more frequent when the inflammation is at its height, a period of about four to eight weeks; during subsidence there is little danger, unless the atrophied and useless eye subsequently becomes congested and painful—and this may occur at almost any time, even years after the original injury (it has been known to supervene forty years after the initial lesion), hence an injured eye must always remain an object of more or less suspicion according to circumstances. An interesting point in this connection is that sometimes, after the sympathetic process has done its work, the eye originally affected turns out to be the more serviceable of the two.

The most perplexing feature of sympathetic ophthalmia is the precise means whereby the disease is transmitted—an enigma that has never been definitely answered. Years since Mackenzie called attention to the fact that a good eye may become inflamed secondarily through some influence exerted by its fellow, and he supposed the infection was by way of the optic nerve. Another and somewhat plausible theory is that transmission is by means of the ciliary nerves, which supply the uveal tract or the vascular pigmented portion of the eyeball, consisting of the iris, ciliary body, and choroid; but it is difficult to explain how the ciliary nerves of one side can communicate with those of the other, since they have no immediate connection; in such case the route would be by way of the nerve centre and return along the fellow ciliary nerve to the eyeball. The short ciliary nerves contain motor, sensitive, and sympathetic nerve fibres derived from the ophthalmic ganglion. Just what influence the sympathetic system and the lymphatics may exert has not been determined, but beyond question they hold an important relation. Some attention has been also given the question whether transmission may not be by way of the circulation and the circle of Willis, but this would apparently be altogether too roundabout and far-fetched, as it involves the choroidal vessels, ophthalmic artery and internal carotid of one side, and, on passing the circle of Willis, a return in reverse order to the other eye.

It must be admitted the optic nerve offers the most plausible solution of the problem, and recent investigations lend additional strength to this view. Deutschman has demonstrated that cultivations of staphylococci instilled into the eyeball or along the sheath of the optic nerve do travel from the point of injection along the nerve itself to the brain, and from thence return along the opposite nerve to its eye. Further, in confirmation of the theory, I may be permitted to briefly cite a recent case that came under observation:

B. S——, aged 16, was kicked by a horse in the right eye, in the latter part of April, 1894, rupturing the eye at the lower sclero-corneal

junction, over the ciliary body, making a wound about one-half inch in length. He stated there was escape of a portion of the vitreous and sudden loss of vision. Residing in the country, he could not receive the daily care which the eye needed, nevertheless was warned to immediately seek advice should redness or photophobia supervene in the fellow eye. Six weeks after injury it was observed the sound optic was painful and inflamed, when he returned to Detroit with Doctor Mills to consult me. I found the injured eye tender and of reduced tension, and painful in the vicinity of the wound; vision, *nil*. The fellow eye was slightly congested, exhibiting slight photophobia; the ophthalmoscope revealed nothing abnormal; vision $\frac{20}{30}$. Prompt enucleation of the injured eye was advised and performed, as the case was deemed threatening. Examination of the remaining eye a day or two later (May 21st, 1894) revealed ciliary congestion, redness of ocular conjunctiva, marked epiphora and photophobia, enlargement of retinal veins, and slight haze over disc; vision $\frac{20}{30}$. Four days after, viz. on the 25th, there was marked neuro-retinitis and slight haziness of vision. On the 26th, increased symptoms of serous iritis, and for the first time was observed the presence of descemitits.

May 28th. Vision $\frac{20}{30}$; 29th, some improvement; 31st. vision improved and deposit on the posterior aspect of the cornea much less.

June 1st. Return of adverse symptoms, and ophthalmoscope showed deposits on cornea increased, and fundus obscured by a hazy vitreous; 3d, severe pain in eye, otherwise the same as on 1st; 4th, complains of more photophobia, and there is deposit on lens; 11th, about the same, vision $\frac{15}{200}$; 16th, vision $\frac{3}{200}$; 18th, marked iritis, pupil contracted from adhesions, and vision $\frac{3}{200}$ the blue color of iris changed to brownish yellow; 25th, still painful, vision $\frac{3}{200}$.

August 17th. Eye still congested, the pupil about one-eighth inch in diameter and adherent to capsule, causing complete posterior synechia; numerous deposits upon anterior capsule of lens, causing opacity; vision $\frac{14}{200}$. 22d, sudden loss of vision, due to recurrence of inflammation.

October 31st. All traces of inflammation had disappeared, and the patient was able to get about with comparative comfort; vision $\frac{10}{200}$.

Examination of the enucleated eye revealed the optic nerve infiltrated and of dark color, which, taken in conjunction with the appearance of neuro-retinitis, would appear to go toward evidencing the sympathetic ophthalmia was in this instance the sequel of infection by way of the optic commissure and fellow optic nerve.

The treatment chiefly followed embraced liberal use of atropine-sulphate instillations, and internally potassium iodide and mercury bichloride. Often nothing is demanded more than relief from the offending of the injured eye, which should of course take place during the prodromal stage. And if the defective optic is highly painful and harbors a foreign body, with loss of vision, it is wiser to enucleate than to run chances, since once a sympathetic ophthalmia is established, but little benefit can be had from the operation. But if the exciting eye retain power of vision, even in slight degree, enucleation is not warranted, since it may ultimately prove the better eye for vision; at all events, it is better to await the subsidence of inflammation. The question whether it is best to immediately enucleate an eye injured in the region of the ciliary body is still mooted, though personal experience suggests an eye wounded in the region of the iris and ciliary body is dangerous to carry around; and if the ciliary body is penetrated, and there is loss of vision, I believe no chances should be taken, but prompt enucleation effected. If the wound of the ciliary body is extensive, it should be enucleated without regard to vision, as in all probability the latter will be destroyed during the progress of the supervening inflammation.

Detroit, Michigan.

CÆSAREAN OPERATION AFTER VERSION AND DECAPITATION.

Ugeskrift for Læger (Copenhagen) narrates a case of labor, primipara, forty years old, in which the head presented, was movable and high up; the umbilical cord and one forearm had prolapsed. The pelvis was contracted. Version and extraction were performed under chloroform, and the body of the infant disengaged, but not the head. As the neck was torn, it was found necessary to complete the separation, and to perform Cæsarean section for extraction of the head, which was tightly impacted in the superior strait. The woman recovered, but only after a protracted attack of peritonitis.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., FEBRUARY 11th, 1895.

Editorial.

PARTURIUNT MONTES, NASCETUR RIDICULUS MUS.

A most interesting little pamphlet, *yclept* medical journal, emanates from Richmond, Virginia, under the editorial auspices of an "all-round good fellow," Doctor Bryce—we say "good fellow," since all who know him concede his right to the title in its most liberal acceptation. It is a matter of regret to his friends, however, that he ever entered upon the "troubled waters of journalism," since his own honesty of purpose leads him to readily assume like rectitude on the part of all with whom he comes in contact, and oftentimes renders him the too easy prey of the Philistines; thus he is sometimes induced to stab in the back with his editorial stylus those with whom he has no quarrel and who are very far from wishing him harm.

In a recent issue of the *Southern Clinic* which reached our table bearing in bold two-inch black letters the legend "Marked Copy," we find reproduced under the caption "Look on This Picture," an editorial that appeared in THE MEDICAL AGE some three months back, followed by a clipping from the *Detroit Free Press* duly re-baptized "And Now Look on This!"

The former was a production intended to discourage, on the part of our fellow-practitioners, too great haste in accepting new remedial agents—and Antitoxin in particular—as specifics against all the ills to which humanity is heir; the article from the *Free Press* covers reference to local enterprise in the manufacture of Antitoxin.

The natural assumption is, an endeavor on the part of Brother Bryce to show there is "a cog loose" somewhere in the connection between the firm that is preparing to manufacture Antitoxin, and the editor of this journal, as he carefully notes THE MEDICAL AGE "is published by Mr. Geo. S. Davis," who is also interested with the aforesaid manufacturing house. Though not expressed in so many words, it is intended to query why THE MEDICAL AGE apparently opposes the trade interests of its publisher.

Perusal of the two lucubrations so carefully copied by Brother Bryce would seem to convey sufficient reply, and evidence that the editorial policy of THE MEDICAL AGE is entirely separate and distinct from the mercantile policy of its publisher—a fact that has been made sufficiently patent on many occasions during the past eighteen months. And it may now be understood, once for all, that THE MEDICAL AGE, as a purveyor of medical literature, is beholden only to its editor.

Incidentally we were somewhat curious to know how our Richmond friend became possessed of the information that to him appears so astounding and incongruous, since THE MEDICAL AGE does not exchange with his periodical, and it is hardly within the bounds of probability that he subscribes for the daily *Free Press*. But on another page was found the following scientific paragraph:

> "Daily Reminder." This is the name of a pretty and valuable little diary sent us from Messrs. F——k S——s & Co., of Detroit. We thank you very much, gentlemen, and trust it may remind us to prescribe your excellent remedies all through the year 1895.

Pursuing the investigation, it was found Doctor Bryce advertises the above firm, which has obtained no little notoriety of somewhat questionable character through its exploiting of "non-secrets" and direct and indirect advertising of its wares to the laity. We also note that the house with which the publisher of THE MEDICAL AGE is connected does not patronize the *Southern Clinic*, which would appear to afford pretty conclusive evidence of the advertising value of the latter. And herein, too, is apparent the woolly pate of an aboriginal denizen of the "Dark Continent" but half-concealed in the foliage of the peculiar growth that gives birth to Cod-liver Oil

Alkaloids, "Sweet Quinine," and an aphrodisiac Kola!

We regret that Brother Bryce has—most undesignedly on his part, we are sure—been made a catspaw, and especially for so trivial a matter as a page of advertising. Loss of self respect is sure to follow barter of this kind; and we would prefer to see the *Southern Clinic* representing only the type of gentleman of which its editor has hitherto been such a distinguished example. Evidently, too, Doctor Bryce had some doubts in this matter, since he took special pains to favor us with his journal—a procedure quite contrary to the policy of those who supplied him with the material for the "sensation" mentioned above, and who make it a rule, in so far as possible, to conceal attacks of this kind by publishing in periodicals of limited circulation and supposed not to come under our eye. For no one is better aware of the fact than these instigators that THE MEDICAL AGE, in so far as literary text may be concerned, is controlled exclusively by its editor.

Verbum sat!

THE SPHINCTER OF THE BLADDER.

Doctor Joseph Griffith, in the *Journal of Anatomy and Physiology*, who has been giving very close study to the physiology of the bladder and urethra, says that the supposed sphincter muscle of the bladder is a myth. All writers agree that the chief resistance to the outflow of urine from the bladder under natural conditions is at the urethro-vesical orifice, but some, such as Budge, Heidenhain, Colberg, Sauer, and Uffelmann, attribute the resistance to the action of a special muscle, "*internal* sphincter vesicæ," surrounding the neck of the bladder, while others, again, uphold the influence of the "*external* sphincter vesicæ" of Henle. But there does not exist either in animals or in man a special muscular thickening or sphincter; the office is sufficiently performed by the ordinary muscular wall of the urethra and urethro-vesical orifice. Further, the external sphincter vesicæ of Henle does not commence at the urethro-vesical orifice even in man, and in some of the lower animals, such as the cat, it is at a distance of one and one-half inches from this point.

It is maintained by Kohlrausch that the fibres of the detrusor urinæ, or the external longitudinal muscular fibres of the bladder, are inserted at right angles into the mythical internal sphincter vesicæ, and he supposes the neck of the bladder is opened by these longitudinal fibres pulling upon the fibres of the sphincter, whereby the sides of the urethro-vesical orifice are separated. The majority of the external longitudinal muscular fibres of the bladder, however, if carefully traced, will be found to gradually change their direction, becoming oblique and transverse before they reach the neck, consequently are not inserted into the exterior of the urethro-vesical orifice and cannot exercise any influence upon the walls thereof.

The natural or normal retention of urine depends upon the state of the muscle in the wall of the bladder during the accumulation, and upon the resistance offered by the urethra to the outflow. Doctor Griffith does not wish it to be inferred that there exist no "special muscular mechanisms for the control of the escape of urine," but desires to emphasize the fact that these muscular mechanisms are not ordinarily exercised in the normal retention of urine, and indeed are not essential to it; as already remarked, the essential factor in retention is that the pressure of the urine in the bladder when retained in small or large quantities exceeds but little the mere hydrostatic pressure. The amount of pressure in excess of the hydrostatic in any given case is exerted upon the muscular walls, and whether the viscus be nearly empty or pretty fully distended, this portion of the total pressure usually remains small and much the same. Therefore the bladder walls are ever undergoing not only dilatation, but also actual relaxation, and during the accumulation of urine the muscular fibres accommodate themselves to the increased quantity of fluid. This power has its limit, but that limit is not reached under normal conditions.

Thus the urine is naturally retained by virtue of the physical resistance to the opening of the urethro-vesical orifice, and by the muscular wall of the bladder relaxing and accommodating itself to the increased quantity of urine without causing an increase in the intra-vesical pressure beyond the hydrostatic.

NUCLEIN—CAUTION.

Now that this new remedy seems to have established itself as a therapeutic agent of no little merit, it becomes necessary to call the attention of the profession to the fact there are a number of products marketed under this title that do not at all coincide with the demands for a Nuclein.

It must be remembered that Nuclein requires to be constantly and persistently employed in doses of fifty to a hundred minims daily of a one-per-cent. solution; and that this must be continued for weeks, months, and perhaps even years.

Again, there are purported solutions of Nuclein which upon chemical test afford a neutral or alkaline reaction, and likewise are strongly alcoholic. True Nuclein, however, is an acid solution, and when brought into the presence of alcohol is instantaneously destroyed.

Nuclein can in no way be compared with such substances as morphine or atropine when employed hypodermatically. Tablets of these alkaloids for subdermic use are essential products, but they are rarely used more than once or twice for any case, or at most not employed continuously for more than a few days; are dissolved in small quantities of water, and injected in strong solution for immediate effect; yet with all due precaution these alkaloids sometimes induce abscesses, even when the syringe employed is given a great deal of care.

Nuclein, as already remarked, must be employed constantly and persistently in large doses for long periods, and this too in cases where the inherent resistance to infective toxins is at a minimum. It is evident, therefore, that this therapeutic agent cannot be employed in the form of a hypodermatic tablet without becoming dangerous to the patient and inimical to the standing of the drug itself.

To employ Nuclein, then, it is demanded that the solution be examined and tested, first, for its chemical reaction, and, second, for the presence of an alcoholic constituent; next, that it be employed by means of a hypodermatic syringe especially reserved for such purpose, and that is constantly subjected to most rigid antisepsis.

ANTITOXIN VS. ANTITOXINE—WARNING.

It may not be generally known to the medical profession that there are two medicaments in market bearing this title. The Antitoxin Serum is the remedy which is heralded for the treatment of diphtheria. The other "Antitoxine" is claimed as "a fine white powder quite soluble in water, more so on the addition of a little glycerin," put up in ounce boxes; moreover is a proprietary remedy manufactured in Great Britain, which, like most of its ilk, claims wonderful antipyretic and analgesic properties.

Thus it behooves physicians who desire to investigate the serum treatment of diphtheria to be assured of the material ordered. It is not unlikely that even the druggists and general purveyors of therapeutic remedies may be misled, and that the individual ordering Antitoxin may at times receive instead "Antitoxine."

EDITORIAL NOTES.

The Dominion Medical Monthly.—

The secession from the ranks of a number of collaborators seems to have given rise to a belief that the *Dominion Medical Monthly* has suspended or is about to do so.

We are very glad to be able to state *of our own personal knowledge* that the *Dominion Medical Monthly* will continue to flourish under the able editorial and publishing management of our friend Doctor Beattie Nesbitt. Number 1 of Volume IV, January, 1895, is on our table, and we observe the periodical has lost none of its old-time merit, but is, on the contrary, materially improved. We are glad to know too that Doctor Nesbitt will henceforth devote more personal attention thereto, which certainly will greatly enhance the value of this esteemed exchange.

Defense of the Dude.—

The *National Medical Review* defends the dude on the ground of his cleanliness—"not one little part of him, simply, but as a whole individual." It calls attention to the fact that "his collar is never melted with the heat of summer, nor his shoes covered with the sands of time; his linen is not stained with the drippings of a tobacco press, neither are

his teeth covered with the green algæ of antiquity; his face is not the sign of a poor barber, neither are his fingers plowed with the deep fissures of the bichloride." Finally, the *Review* insists that the dude is "surgically clean, the latest teacher, and that the world in general can profit by his lessons."

A Lost Art.—

A few years since physicians knew enough of drugs and pharmacy to prescribe medicines from a pocket-case and secure practically accurate division by the unaided eye. But the development of tablet triturates has done away with this, and the modern graduate if deprived of these would find himself entirely at sea. Under these circumstances the tablet triturate has worked more harm than good. Besides, the triturate as generally manufactured carries no evidence of accuracy when it embodies a fluid preparation.

Urocidin.—

Under this title appears another of the myriad proprietary preparations which are so rapidly multiplying, the promoters of which claim it as a "sure remedy" for uric-acid diathesis. It is said to be merely a mechanical mixture of citrates of potassium, sodium, and lithium, with Glauber's salt added.

The Popular Science Monthly and Antitoxin Serum.—

The February number of the *Popular Science Monthly* presents a very complete article on "The Serum Treatment of Diphtheria," by Doctor Samuel T. Armstrong, Visiting Physician to the Hospital for Contagious Diseases, New York.

Death of Doctor Loomis.—

The medical profession generally will be grieved to learn of the death of Professor Alfred L. Loomis, of New York, which occurred on Wednesday, the 23d ult., from pneumonia. He had been ill only from the previous Saturday.

Personal.—

Doctor George H. Goodger, of the class of 1890, Detroit College of Medicine, is located at Davisburgh, Michigan, and would like the different members of his class to communicate with him.

Items and News.

Losing Hold on Life.—

In old countries the lower orders, as a rule, have but a low vitality. It may be truer to say that the vital volition is weak. Let the learned settle the definition. The fact is easily accounted for. During generations upon generations the majority of European agricultural populations live upon vegetable food, like the majority of Eastern Asiatics, and with the same result. Hard labor produces hard muscles, but vegetable food yields a low vital tension, so to say. Soldiers know it well enough. The pale-faced city clerk who eats meat twice a day will outfight and outlast and outstarve the burly laborer whose big thews and sinews are mostly compounded of potatoes, corn, and water.—"Casa Braccio," by MARION CRAWFORD in the February *Century*.

Death of the Oldest Negro Woman in America.—

Millie Jefferson, believed to have been the oldest negro woman in America, died at the residence of her great-grandson in New York on December 17th. The date of her birth, March 30th, 1785, is definitely known; so that at the time of her death she was one hundred and nine years, eight months and sixteen days old. She was born on the plantation of Thomas Jefferson in Virginia, and married the body-servant of that distinguished statesman. Three of her nine children survive her, and there are fifty-seven grandchildren and twenty-six great grandchildren living. After the Civil War she moved from Virginia to Louisiana, and had resided in New York only for the last eight years.—*Boston Medical and Surgical Journal.*

Locked Nymphæ.—

A recent issue of the *Medical Times* contains what under other circumstances we should be tempted to call a "cock-and-bull story," about a lady who consulted Doctor Collyer, of New York, for "locked nymphæ," the nymphæ aforesaid being padlocked by a jealous husband during his occasional absences. The most remarkable part of the story is that the poor, suffering wife is alleged to have submitted to this treatment for upwards of five years before consulting anyone. This brutal method of enforcing physical chastity goes far beyond the plan adopted by the suspicious French king whose "girdle of chastity" is one of the curiosities that tempt English travelers to the Musee de Cluny, in Paris.—*Medical Press and Circular.*

Warning.—

An editorial in the *Journal of the American Medical Association* refers to the total failure of erysipelas toxin injections for the cure of sarcomata and other malignant growths, and the fact that though the remedy has been faithfully tried, not a single well authenticated case of recovery has been reported.

This leads to the remark that the New York City health department warns physicians to have care during the present craze that fraud be not practiced on them by preparations of the different toxins, especially the diphtheria serum as placed on the market by mercantile houses. Such fraudulent preparations, it declares, are now in the market.—*Omaha Clinic.*

Why?

Doctor J. P. Dake, a leading Tennessee homœopathist, claims (*Medical Current*) that the law of similars is not applicable to any diseases which are characterized by destruction of tissues, or when the cause cannot be removed, or to such as are due to chemical action, mechanical violence, or unhygienic surroundings. This would reduce homœopathy to the treatment of functional disorders exclusively. Under the circumstances it is difficult to see why Doctor Dake should retain a sectarian title, unless it be for advertising purposes.—*Medical Standard.*

Literary Note.—

The *Medical and Surgical Reporter*, speaking of medical literature, says:

"'Of the making of books there is no end,' thanks to the prevision of generous publishers, and the literary crop of the year contains some wheat among the tares. A few works have been issued in special lines whose value justifies their existence. For pronounced excellence, general utility, and widest application, Doctor Gould's new medical dictionary deserves specific mention among the publications of 1894."

Support for the Index Medicus.—

The Boston Society for Medical Improvement, at its annual meeting on January 7th, appropriated a sum from its reserve funds for the support of the *Index Medicus*, on condition that similar steps should be taken by other societies and institutions in Boston and other cities, which are or ought to be interested in securing the continued publication of this valuable periodical.—*Boston Medical and Surgical Journal.*

Book Reviews.

THE COSMOPOLITAN. Price, 15 cents; $1 50 a year. Cosmopolitan Publishing Co., Irvington on-the-Hudson, N. Y.

In the January number begins an old-fashioned sea story, full of interest and adventure, by W. Clark Russell. Ouida contributes an installment of the "Great Passions of History" series, which has been appearing in this magazine. A discussion is aroused by Mr. Edward Bok's article on "The Young Man and the Church." Just preceding the famous Charcot's death he prepared an article for *The Cosmopolitan* on Pasteur, to be published after Pasteur's death, but Charcot has died first, and so with the consent of his executors the article is given now. The present "Theatrical Season in New York" is critically considered by Mr. James S. Metcalfe, and there are stories by Tourgée, Howells, and the famous French writer François Coppée.

In the February number General Lord Wolseley makes a most important contribution to the literature of the China-Japan war in an article entitled "What China Should Do." Two other noted foreign authors contribute interesting articles to this number—Rosita Mauri, the famous Parisian *danseuse*, gives the history of the ballet, and Emile Ollivier tells the story of "The Fall of Louis Philippe." Julian Hawthorne writes of "Salvation via the Rack," which is illustrated with drawings and photographs of the various instruments used to torture poor humanity. Mrs. Reginald de Koven, Anatole France, W. Clark Russell, Albion W. Tourgée and William Dean Howells also contribute to this number.

REVIEW OF REVIEWS. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The January issue is especially interesting. The frontispiece is a portrait of Robert Louis Stevenson, and there is embodied in the text a sketch of this noted author, and likewise another picture, drawn from life by Victor Gribayedoff. Mr. Robert Donald presents a pen picture of John Burns, and an account of the public and private life of the latter that is calculated to cause Americans to view this gentleman in a new light.

In the department of "Progress of the World" attention is called to the decline of smallpox and typhoid fever, and the increased efforts of modern sanitary science to grapple with children's diseases, especially diphtheria and scarlet fever. In the same department is discussed the Nicaragua Canal question,

the dispute between Venezuela and Great Britain, the payment of damages to Canadian seal poachers, the prospects of civil service reform, the demand for a bank-note currency, the Armenian question, the war in China, South African affairs, the French in Madagascar, and the death of the Princess Bismarck. Archdeacon Farrar contributes a sketch of the Reverend Doctor Henry S. Lunn, the originator of the Grindelwald Summer Conferences.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

Mrs. Ward's novel, "A Singular Life," chapters IV–VI, occupies first place in the February number; but the leading separate article is Mrs. Alexander Bell's "The Subtle Art of Speech-reading." "A Voyage in the Dark" is by Rowland E. Robinson; "A Study of the Mob," by Boris Sidis. Miss Jewett, Mrs. Wiggin and Miss Ewell also contribute short stories. "The Champion of the Middle Ground" is by Edith M. Thomas; "New Figures in Literature and Art" is a series begun by a paper on "Daniel Chester French," the sculptor; Mrs. Fields rehearses the career of "Celia Thaxter;" Theodore Roosevelt writes on "The Present Status of Civil Service Reform," M. V. O'Shea of "Physical Training in the Public Schools;" "Russia as a Civilizing Force in Asia" is by James M. Hubbard, "The Frosted Pane" by Charles G. D. Roberts, "The Dancer" by Edna Clarke, "The Leones" by William Canton. Among the reviews is "The Three English Novels." There are also "Recent Translations from the Classics," "Comment on New Books," and "The Contributors' Club."

THE CENTURY MAGAZINE. Price, 35 cents; $4.00 per year. Century Publishing Company, New York.

The February number continues "The Life of Napoleon Buonaparte," and contains also a personal recollection of Oliver Wendell Holmes, by Mrs. James T. Field; "An Errant Wooing," by Mrs. Benton Harrison; "Luka Filipov," by Robt. Johnson; "Characteristics of Geo. Inness," by Geo. Sheldon; "The Gospel of Art," by Kenyon Cox; "Kate Negly's Leadings," by Lucy S. Furman; "The End of the Game," by Alice Brown; "Casa Braccio," Part IV, by Marion Crawford; "New Weapons of the U. S. Army," by Victor Mason; "The Passing of Mohammed," by Edwin Arnold; "The Death of Emin Pasha," by B. D. Mohun; "He Would a Wooing Go," by Frank Humphrey; "Lincoln and Grant," by Noah Brooks; finally an interesting discussion of "A Plan to Save the Forests," by a number of able gentlemen.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

The February number contains: "Studies of Childhood," by Professor James Sully, M.A., LL.D.; "A Day's Hunting among the Eskimos," by Doctor F. Nansen; "Nature's Triumph," by James Rodway, F.L.S.; "Pleasures of the Telescope," by Garrett P. Serviss; "The Starry Heavens" (continued); "The United States Geological Survey," by C. D. Walcott; "The Thorns of Plants," by M. Henri Coupin; "Some Material Forces of the Social Organism," by John W. Langley; "The Serum Treatment of Diphtheria," by Doctor S. T. Armstrong; "Windmills and Meteorology," by P. J. De Ridder; "Brain Development as related to Evolution," by G. Hilton Scribner; "Symbols," by Miss Helen Zimmern; "Sketch of C. A. LeSueur," by D. S. Jordan; "Editor's Table," etc.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

The February number contains: "The Art of Living," by Robert Grant; "A Question of Privilege," by Bret Harte; "The City of Dream," by Rosamund Marriott Watson; "Recent Work of Elihu Vedder," by W. C. Brownell; "Bisnaga's Madeline," by Le Clear Beard; "Giants and Giantism," by C. L. Dana; "American Wood-engravers;" "A Moral Obliquity," by Francis Lynde; "The Passing of the Whigs," by Noah Brooks; "The End of the Continent," by John R. Spears; "Nel Mezzo Del Cammin," by A. B. Carr; "James Anthony Froude," by Augustine Birrell; "Philip Gilbert Hamerton;" "The Amazing Marriage," Chapters V-VIII, by George Meredith; "Some Old Letters," and "The Point of View."

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia.

The complete novel in the February issue is "The Chapel of Ease," by Harriet Riddle Davis. Other contributions are: "The Diamond-Back Terrapin," by David B. Fitzgerald; "Quong Lee," by Francis Lynde; "A Walk in Winter," by Charles C. Abbott; "The Fate of the Farmer," by Fred. P. Powers; "A Precedent," by Alice M. Whitlock; "The Beginnings of a Cavalry Troop," by Kenneth Brown; "An Idyl of the Forties," by Champion Bissell; "Lingo in Literature," by Wil-

liam C. Elam; "The Pleasures of Bad Taste," by Annie Winston; "Corpus Christi in Seville," by Caroline E. White. The poetry is by Florence E. Coates, Carrie B. Morgan, Edith M. Thomas, and Richard Powell.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 per year. Overland Publishing Company, San Francisco.

Contents for January are: "Evolution in Shipping and Ship building on the Pacific Coast," by Irving M. Scott and others; "Stedman and Some of His British Contemporaries," by Mary J. Reid; "Love and Sorrow," by C. Horatio Jessen; "The Song of the Balboa Sea," by Joaquin Miller; "Felicia of Mexico," by Arthur Grissom; "Tim Slather's Ride," by Granville P. Hurst; "In the Golden Chersonese," by Rounsevelle Wildman; "The Naval Control of the Pacific Ocean," by Marsden Manson.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 per year. Donahoe Magazine Company, Boston.

In its entertaining and solid character none of the magazines excel *Donahoe's* for January. It touches contemporary life on many sides and on many vital questions. Its leading article discusses the causes and lessons of the recent Democratic defeat, by Gamaliel Bradford; Reverend John T. Smith writes of Cardinal Gibbons; Edmund Noble of the Tsar and his empire.

The magazine is particularly strong in original fiction, while the illustrations are as artistic and attractive as usual.

McCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

In the February number appear two reproductions of the cast of the face of Napoleon, accompanied by a history of the cast, by Baron de St. Pôl; "A Study of Lincoln during the Civil War," by Colonel A. K. McClure; "Tributes to Robert Louis Stevenson," by Barrie, Crockett, and Ian Maclaren; also an illustrated article on "Stevenson in the South Sea," by a friend of Stevenson's; and "A Murder and Robbery in an Express Car," by a Pinkerton detective.

HOME AND COUNTRY. Price, 15 cents; $1.50 a year. Home and Country Publishing Co., New York.

The January number contains "The Story of a Wedding Dress," by Florence E. Benedict; "The Origin of the Modern Orchestra," by Albert Grieg; "Rags," by Percival Fallworth; "The Sharp-shooter of the Alps;" "Lamps," by Bernard Shipman; "The Last Days of Napoleon III.," by Edgar Mels; "Cora Chase Walsh," by George B. Loud; and "The Indiana Soldiers' and Sailors' Orphans' Home," by Wallace Foster.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co. (Limited), New York.

We are in receipt of the February or midwinter number, the contents of which well carry out the promise made by the publishers that this magazine during the current year will be more interesting than ever. This serial is the great caterer to domestic needs, and can be recommended for its cheapness, freshness, and utility.

GARDEN AND FOREST. Price, 10 cents; $4 00 per year. The Garden and Forest Publishing Co., New York.

No one who is interested in outdoor life, in horticulture, in flowers or gardening of any kind, can afford to be without this journal. Its weekly visits are eagerly anticipated, and it is never laid down until it has been read from title-page to finis.

THE ORANGE JUDD FARMER.

This periodical contains the best matter in the departments of Farm, Market, Garden, and Home, and comes weekly laden with the latest news in each. Our medical friends who are interested in horticulture, gardening, etc., will be profited by examining its pages.

LOURDES. By Emile Zola. Cloth; 16mo; pp. 486. Price, $1.25. Chicago: F. Tennyson Neeley.

This is one of the few books of Zola's which we can unhesitatingly recommend; moreover, it is the best and most powerful, and will excite curiosity and interest in that it aims to tell as exactly as possible what may be seen by a person who accompanies the pilgrimage to Lourdes without any belief regarding its miracles, either for or against. It is an impartial study of what goes on at the great Continental shrine of the Virgin —an excellent study of the faith cure, and moreover a truthful picture of the evils that surround such minglings of religion and mammon.

It is stated that this work has been put on the Index Expurgatorius of the Roman Catholic Church. If this be true, no graver error could have been committed, since no church or class of religionists can afford to bolster up what is *per se* a manifest fraud and means of illicit money-getting.

FUNDAMENTAL PROBLEMS. By Doctor Paul Carus. Paper; 16mo; pp. 373. Price, 50 cents. The Open Court Publishing Co., Chicago.

This is Number 2 of Volume II of the Religion of Science Library; and we cannot give a better criticism than to offer the motto upon the title page: "No agnosticism but positive science, no mysticism but clear thought, neither supernaturalism nor materialism but a unitary conception of the world, no dogma but religion, no creed but faith."

This is the second revised and enlarged edition of a publication that originally appeared as a series of editorials in *The Open Court*, and, the ideas presented having been discussed in that journal, the results accruing are embodied in this new edition. It will well repay perusal.

OPHTHALMIC DISEASES AND THERAPEUTICS. By A. B. Norton, M.D. Half morocco; 8vo; pp. 555. Price, $4.50. Boericke & Tafel, Philadelphia.

This is nominally a homœopathic book, being the work of a homœopathic practitioner. Nevertheless it is a volume the equal of any that has proceeded from any source upon this topic. It is a complete exponent of ophthalmic diseases, and abounds in new and clever ideas which must necessarily be of great advantage to the student. It is, moreover, elegantly illustrated, there being no less than fifty three plates exclusive of a dozen lithographic figures. We cordially recommend the volume as a most valuable text-book to the medical profession at large without reference to "pathy" or "ism."

PRACTICAL URINE-ANALYSIS AND URINARY DIAGNOSIS. By Charles W. Purdy. M.D. Cloth; 8vo; pp. 360 Price, $2.50. The F. A. Davis Co., Philadelphia.

The fact that this work is by the author of "Bright's Disease and Allied Affections of the Kidneys," and also of "Diabetes, its Symptoms and Treatment," is sufficient evidence of its value. It is fully up to date, and deals with urine-analysis in all its phases, simple and compound, hence is available for the chemist as well as the physician. In matters of diagnosis it is especially full, and since the publication of Bird's work there has been none in the English language that so completely fulfills the wants of the practitioner.

IN SUNNY FRANCE. By Henry Tuckley. Cloth; 16mo; 450 pages. Hunt & Eaton, New York.

This is a most readable book, being both easy and interesting, portraying present-day life in the French Republic. It presents a picture of Gallic life, manners, customs, laws, and religion. If one has never had a desire to visit the Republic, such will be speedily stimulated by reading this delightful little work. It is almost a complete guide book to Paris, and the contrast which is drawn between this city of beauty and gaiety, and London, which is all stability and commerce, only adds to the interest every American must have in both cities. We cordially recommend the work to all.

MANUAL OF MODERN SURGERY. By John C. Da Costa, M.D. Cloth; 12mo; pp. 809. Price, $2.50. W. B. Saunders, Philadelphia.

The aim of this volume is to present in clear and concise form the fundamental principles, chief operations, and exact methods of modern surgery—in fact, its scope is to stand between the cumbrous text book and the concentrated compend; which necessitated the elimination of obsolete and unessential methods in favor of the living and essential. A large amount of space is devoted to fractures and dislocations, and operative surgery is well taken up, the most important procedures being described.

A MANUAL OF THE PRACTICE OF MEDICINE. By A. A. Stevens, A.M., M D. Cloth; 12mo; pp. 502. Price, $2.50. W. B. Saunders, Philadelphia.

That this attempt to reduce the practice of medicine within concise and assimilable limits has not failed, is evidenced by the fact that a third edition was called for within two years of its appearance.

TWENTIETH CENTURY PRACTICE—An International Encyclopædia of Modern Surgical Science.

Messrs. William Wood & Co. announce under this title a new work by leading authorities of Europe and America, to be complete in twenty octavo volumes.

They say: "Considering the vast progress which medical science has made during the past twenty years, and the complete revolution which theory and practice have in many cases undergone, the time has seemed ripe for a full presentation by master hands of medicine as it is at the close of the nineteenth and opening of the twentieth century. To this end a large number of writers, men of acknowledged international reputation and undisputed authority, have been invited to undertake the work; each one is a master, and conceded to be such by the entire medical world. In fine, no pains will be spared to make the work what its name indicates—an authoritative guide to the practice of medicine at the opening of the twentieth century.

This work will be under the immediate supervision of Doctor Thomas L. Stedman, of New York City, and the first volume may be expected some time in February. A complete prospectus will be sent upon application to the publishers.

Therapeutic Brevities.

Cocaine Hypodermatically.—In the *Virginia Medical Monthly*, Doctor W. P. Carr gives a table of 283 cases showing the varied uses to which Cocaine can be put. About the mouth it is usually unsatisfactory, and disagreeable symptoms are often produced; the effect is also confined to a small area, is incomplete and transient. The only dangerous symptoms ever noticed arose from the use of cocaine in the mouth, and this was a case of extreme susceptibility. Hypodermatic injections can be used in inflamed and highly sensitive tissues without the slightest pain, but it is never necessary to insert the needle at an excessively tender spot. He injected one grain in about the middle of the extensor surface of his own forearm, and found, in eight minutes, loss of sensation following the cutaneous branches of the radial nerve down to the middle finger, forming a strip of cocainized skin eight or ten inches long and not over an inch in width. He prefers four- or eight-per-cent. solution.

Antitoxin and Nephritis.—I regret to have to record that a further experience of antitoxin has resulted in six deaths out of a total of eight cases treated, all due to inflammation of the kidneys. This is a sad but singular confirmation of the testimony published in the *Medical Press* from Doctor Benda, of Berlin, who, on post-mortem examination of thirty-nine subjects dying under the antitoxin treatment, found nephritis in thirty-three cases, eight of which were of severe grade.

From an analysis of 1,000 consecutive cases of diphtheria, I find that death under the usual treatment resulted from uræmia in only 2.7 per cent., the total mortality being at the rate of 27.4 per cent. It is perfectly clear that if we are to get at the truth of the result of antitoxin treatment, an autopsy should be made on every case dying under it, that we may learn the exact cause of death in each case of fatal issue.—Doctor Lennox Browne, in *Medical Press and Circular.*

Croton Chloral an Antidote for Strychnine.—In the course of some experiments to determine the action of toxic substances upon the excitability of peripheral nerves and muscles, Grigorescu developed the fact that Butyl-Chloral opposes the toxic action of strychnine. He found that if injections of strychnine were made in frogs, those which also received Butyl-Chloral remained torpid, while those with strychnine alone were tetanized. The least noise increased the tetanus of the latter, but the former did not show any spasm. After some hours the Butyl-Chloral was eliminated, then these frogs were seized with tetanus as were the others. On repeating the antidote up to the elimination of the strychnine, complete cures resulted. On experimenting with larger frogs similar results were obtained. The observations demonstrate that Butyl-Chloral energetically opposes its physiological action to the physiological action of strychnine.—*Archives de Physiologie.*

Nitro-Glycerin in Vomiting.—I have used Nitro-glycerin systematically for the last three years in every form of vomiting. In vomiting of gastric catarrh, whether adult or infantile, acute or chronic, alcoholic or anæmic, it acts almost as a specific—the vomiting ceases at once. In vomiting of advanced pregnancy it is of the greatest service; and in many cerebral cases it also markedly checks the sickness. In peritonitis alone it increases the vomiting, not, however, to a distressing extent, and the effect soon passes off. In vomiting in connection with pulmonary phthisis it is of little value; atropine is better. In combination with catechu it acts very well in lienteric diarrhœa. The vomiting of influenza is often relieved by it, though not to the same extent as by atropine. —Doctor Humphreys, in *British Medical Journal.*

Ipecac as an Oxytocic.—A contributor to the *British Medical Journal* says: In the course of general practice extending over many years I invariably carried a bottle of Wine of Ipecac in my midwifery bag, and rarely if ever gave a dose of ergot in the first stage of labor. Time after time on coming to a confinement case where the pains had been feeble and inefficient, or had totally ceased, two or three ten- or fifteen-minim doses of the wine at intervals of ten minutes have been followed in a surprisingly short time by energetic uterine action, with a rapid termination of the labor. It never produces the quasi-tetanic contraction so often met with as the result of ergot, the pains continuing to recur regularly, just as they do in natural labor, but with greater force and at shorter intervals.

Medical vs. Surgical Relief.—In a paper upon "Laws of Growth in Relation to the Nervous Centres," in the *Charlotte Medical Journal*, Doctor Caldwell declares the principal reproductive organs of the female sex

to be the most abused of any in the human economy; that no man would submit to such treatment. Consequently he enters a protest against the torture which only patient and confiding woman can endure. He further adds that by the use of such medicaments as Liquor Sedans and Saw Palmetto, surgery could be done away with, and these drugs "are destined to produce a new era in gynæcology;" that in "irregular, painful, suppressed and excessive menstruation Liquor Sedans is almost a specific," while in uterine or ovarian neuralgias or displacements "it acts like magic."

Diphtheria.—A doctor of good standing affirms that he obtained in the treatment of diphtheria as favorable results from the administration of a combination of Iodide of Sodium and Salicylate of Soda as those reported from the use of the serum-therapy, without its risks. His mixture is:

Iodide of sodium, 30 grains.
Salicylate of soda, 1 drachm.
Syrup of orange, 1 ounce.
Water, sufficient to make 8 ounces.

Dose: A tablespoonful every hour for a child.

Out of seventeen cases thus treated, only three ended fatally. Under the influence of the mixture the false membranes become rapidly detached, and their reproduction ceases in a short time completely.—*Medical Press and Circular.*

Lactophenin and Acute Articular Rheumatism.—Doctor von Roth, in the *Wiener Klinische Wochenschrift*, declares that in acute articular rheumatism Lactophenin is far superior to sodium salicylate, and moreover induces no unpleasant effects. Twenty-eight cases were treated with this preparation, and in all, pain, local redness and swelling disappeared after twenty four to forty eight hours, thus ushering in convalescence; the temperature was permanently depressed. Doctor von Roth also adds "the remedy rendered excellent service in individual cases of chorea, and mitigated the severest neuralgias of the tabetic."

Alstonia Constricta—Given as a tonic in cases of debility dependent upon defective assimilation due to faulty digestion; also in debility following uterine disorders. Cathcart, of Australia, used it with success in the debility following parturition, or arising from lactation, or prostration from fevers. In atonic dyspepsia with loss of appetite, and in the diarrhœa following indigestion, it produces good results. In nervous prostration following uterine displacements, that are without anæmia with the consequent digestive faults, Alstonia is most valuable.—*Medical Times.*

Epileptic Insanity.—Bondurant, in the *American Journal of Insanity*, declares borax, antipyrin, acetanilid, phenacetin, and many other alleged anti-epileptic agents, save in rare cases, are without influence: that while the bromides *may* postpone the occurrence of the convulsions, in most cases they "do *more* harm than good." In dealing with the maniacal attacks, seclusion may be necessary. Sedatives should be employed very rarely, if at all. The best single remedy in the *status epilepticus* is *Blood letting*, and of drugs the most valuable is Chloral.

Parsons' Local Anæsthetic.—

Chloroform, 12 grammes.
Tincture of aconite, 12 grammes.
Tincture of capsicum, 4 grammes.
Tincture of pyrethrum, 2 grammes.
Oil of cloves, 2 grammes.
Gum camphor, 2 grammes.

Dissolve camphor in chloroform, add oil of cloves, and lastly the tinctures.

This is accredited with almost magical local anæsthetic effects.

Tapeworm.—The *Medical Brief* recommends the flowers of Mignonette. Two ounces of the flowers are steeped in a pint of boiling water for an hour, or until their strength is exhausted. The decoction is then strained and the whole taken at one dose, fasting—that is, nothing must be eaten for twenty-four hours previous to taking. In half an hour two ounces of Castor Oil must be ingested, and in a short time the parasite is expelled whole.

Cannabis Indica for Itching.—Mackenzie declares Indian Hemp will give relief in the itching of skin diseases not amenable to local treatment. The full effect of the drug must be produced promptly. He employs the tincture in doses of five or ten drops on sugar, repeated as often as is necessary.

Sparteine Externally.—Doctors Guinard and Gustave Geley report to the French Academy of Sciences that they have found the external application of Sparteine to give remarkable results in cases where the skin is the active seat of disease, more particularly in cases of erysipelas.

Indigestion.—A Mexican author recommends the juice of the Pineapple. In the United States Bromelin is preferred, as representing more faithfully the digestant principle contained in the fruit.—*Exchange.*

Castor Oil for Children.—Oleum Ricini heated and thoroughly applied to the abdomen of children will often move the bowels quite as effectually as when given internally. —*Medical Times.*

Ergot for Enlarged Tonsils.—Doctor James Castle declares tonsillotomy may often be obviated by injecting into the hypertrophied glands from five to ten minims of Normal Liquid Ergot.

A New Depilatory.—*L'Union Medicale* suggests a mixture of Alcohol 48, Iodine 3, Collodion 140, Oil of Turpentine 6, Castor Oil 8 parts—to be applied daily for three or four days.

Chloral and Chronic Alcoholism.—It is worth remembering that Chloral is apt to prove a dangerous drug when any considerable amount is administered to habitual drunkards.

Uterine Inertia.—Give normal liquid Ergot. Put a drachm in fifteen teaspoonfuls of water, and beginning early give a teaspoonful every ten or fifteen minutes.—*Exchange.*

Arbor Vitæ.—Twenty drops of the tincture of *Thuja occidentalis* given during the day is a valuable adjunct in the treatment of cancer.—*Semaine Médicale.*

Lippia Mexicana.—This drug is almost a specific in the hoarse, barking winter cough without secretion, so common in northern climates.

Asthma.—There is perhaps no one remedy which is so efficient in all cases of asthma, regardless of their source, as Sodium Iodide.

Ignatia Amara.—A prominent Homœopathic practitioner insists this drug will cause the smoker to lose all taste for tobacco.

Chronic Bronchitis.—An Argentine medical journal declares that the juice of the Banana is most efficacious in this complaint.

Medical Progress.

Cod Liver Oil—What is It?*—Ever since 1841, when cod-liver oil was so strongly advocated by Bennett, it has held a prominent place in the confidence of physicians. From this date we find that many and careful studies have been made, so that we may say that its scientific use is of comparatively recent origin, although it has been employed empirically for nearly two hundred years. The chemistry of this subject is by no means, even now, complete, although many analyses have been made, so that at intervals one finds in the literature various hypotheses as to what ingredients this remedy's virtues may be attributed to. In spite of discordant theories and the contradictory results of chemical analysis, cod-liver oil is still regarded as a remedy of the highest value in diseases marked by malnutrition, of which pulmonary tuberculosis is the most frequent occasion for its employment.

What then can be said of its composition? Briefly, it is principally, first, olein glyceride (70 per cent.) with variable quantities of stearin, palmitin (nearly 25 per cent.), and myristin glycerides, the latter increasing with the darker color. So far no controversy has arisen beyond the unconfirmed statement of Winckler (1852) that glycerin could not be obtained from cod-liver oil, which he regarded as a whole, containing propyl oxide. Second, iodine, in from 0.0012 (Bird) to 0.004 per cent. (De Jongh), its presence first demonstrated by De l'Orme, but even now it is not known in what form it exists; on the other hand, several observers have failed to detect it in all specimens. Third, bromine. Fourth, phosphorus: as pre-existent phosphoric acid, 0.0789; as obtained by total oxidation of the oil, 0.1047 per cent. (De Jongh). Fifth, sulphur. Sixth, biliary acids. Seventh, free acids, calculated as acetic acid, 0.01 to 1.80 per cent. (Charles, 1882), and regarded as butyric and acetic acids by De Jongh (1849). It is quite likely that free oleic, palmitic and stearic acids exist in the oil. Eighth, gaduin, $C_{35}H_{46}O_9$, identical with morrhuic acid (Gautier and Mourgues, 1888), existing as an unstable compound resembling lecithin, and in contact with acids and alkalies decomposing into morrhuic acid, $C_9H_{13}NO_3$, phosphoric acid and glycerin. Ninth, gadic acid (Luck, 1857), deposited from light-brown oil.

Under the name of morrhuolins are included the so-called alkaloids of cod-liver

---

*Copyright, 1894.

oil; morrhuic acid mentioned above; dihydrolutidin, $C_7H_{11}N$; asellin, $C_{28}H_{32}N_4$; amylamin, $C_5H_{13}N$; oxycollidin, $C_8H_{11}NO$; morrhuin, $C_9H_{27}N_3$; nicomorrhuin, $C_{20}H_{28}N_4$; the last four being the most active. Gautier and Mourgues found, however, in yellow oils six definite bases: butylamin, amylamin, hexylamin, dihydrolutidin, asellin, morrhuin and morrhuic acid. It will be observed that they failed to find oxycollidin and nicomorrhuin. So far as the oily constituents, iodine, bromine, sulphur, phosphorus, biliary substances and free acids are concerned, there is virtual agreement in the results of analyses.

As to the so-called alkaloids, or definite bases, there is abundant opportunity for criticism. It is remarkable that they are most abundant in the brown oils, and from these is commercially obtained morrhuol, the name applied to an alcoholic extractive derivable from cod-liver oil and of probably indefinite chemical structure. Similarly the term "gaduol" has been employed. Presumably morrhuol, which according to Lafarge (1885) is a very aromatic substance of a sharp, bitter taste found in b own oils 4.50 to 6.00, yellow oils 2.50 to 3.00, and in white oils 1.50 to 2.00 per cent., contains most of the so-called alkaloids, together with the iodine, bromine, and pho phorus, and is the substance which is supposed to represent the active principles of the oil.

The physiological properties of the six alkaloids have been determined by Gautier and Mourgues to be as follows:

Butylamin: In sufficient doses this produces in animals fatigue, stupor, vomiting, and a certain degree of paresis. In small doses it excites the urinary secretions; in large doses it is at the same time convulsive and paralyzing; in medium doses it throws the animals into a sort of somnolence, with muscular paresis, but with complete conservation of the intelligence. Although poisonous, it does not produce death unless given in very large doses.

Amylamin: This is a very active base. In small doses it excites the reflexes and the urinary secretion. In large doses it provokes convulsive trembling, then regular convulsions and death.

Hexylamin acts almost like amylamin, but with less intensity.

Dihydrolutidin is a rather toxic base, even in small doses, when it produces a notable diminution of sensibility In larger doses it provokes trembling and convulsions in the muscles of the face. With still larger doses in a guinea-pig the trembling increases and becomes more general. Very lively periods of excitation are followed by profound depression with insensibility and paralysis o the muscles, especially of the posterior mem bers. The animal gradually goes into at asphyxiated collapse.

Asellin is only a feebly active base. It sufficient dose it produces dyspnœa, stupor convulsive troubles, and in large doses death

Morrhuin is one of the most active principles of the oil; it is also in larger quantity—a little more than one-third of the total alkaloids. This is believed to be a powerful stimulant to the function of nutrition and assimilation, producing a rapid circulation of the extractive residues of cell life towards the blood and kidneys, where they are eliminated, and in this way provoking indirectly a powerful movement of the assimilation. Virtually it is believed to increase the appetite and to provoke diaphoresis and diuresis.

As we read the results of these experiments, we cannot but be impressed by the fact that these symptoms are the symptoms of ptomaine poisoning. And when one remembers that the process of manufacturing hitherto employed is such that putrefaction is an important factor in the production of the oil, as anyone will testify who has visited the North Cape, where the stench encountered upon the journey is as prevalent and repulsive as that found near the menhaden-rendering works of the Atlantic Coast, the impression becomes a certainty. Without doubt, the alkaloids contained in morrhuol are putrefactive or cadaveric alkaloids, and of these amylamin, asellin, dihydrolutidin are assuredly poisonous and are so classified in Gould's table as modified from Vaughan and Novy. Amylamin can also be obtained from horn and from putrid yeast. Morrhuin, as is stated above, is probably diuretic and diaphoretic. Butylamin may or may not be toxic; it is quite probably the latter. That any of these alkaloids are present in cod-liver oil when prepared at the place of the fisheries, by a proper process, is extremely doubtful. So far as I can learn, no analyses have been made of such cod-liver oil. To assume that morrhuol represents in any way the active therapeutic properties of cod-liver oil, is to assume that cod-liver oil is useful only in the proportion that it is putrefied. My attention having been called to the reports of Lafarge (1885), and later of Germain Sée, I experimented with morrhuol for several months, and finally, convinced of its absolute failure, I abandoned its use. I was so thoroughly positive of its uselessness that the paper of Bouillot did not induce me to repeat my observations. If there are any medicinal properties in the preparations of the so-called active principles from which oil is removed,

or which are removed from the oil, they must be entirely due to the other substances with which they are incorporated. The substitution of active principles in place of crude drugs is praiseworthy, when it is proved that these active principles represent the properties of the drug or possess in themselves definite physiological action. No digitalin, or digitonin, or digitoxin, has yet been isolated which fully represents digitalis; why then need we expect that alkaloids shall represent cod-liver oil, even if they arise from its putrefaction?

To what then can we attribute the beneficial action of cod-liver oil in wasting diseases? That cod-liver oil is a food, a food of special value, because of its peculiar properties.

To quote Farquharson: "It has been proved by experiment that animal are more digestible than vegetable oils, and cod-liver oil is the most readily assimilated of all. After being emulsified by the pancreatic juice it comes in contact with the bile, which distinctly increases its power in passing through moist animal membrane; and it is probable also that the biliary principles incorporated in its own structure aid in enabling it to be easily absorbed by the lacteals. Its action in the system is to improve the general constitutional tone, to evolve force and heat, and to aid in supplying those fatty elements which are so essentially requisite for the construction and repair of the tissues. It supplies the fatty matter on which the proper functions of cell growth and development depend, the nuclei of the cells being formed of fat." The free fatty acids contained also aid in emulsification and absorption from the alimentary canal.

It improves the nutrition and supplies the fatty ingredients necessary for the growth and repair of the nervous system. It improves the quality of the blood, increasing the number of the red corpuscles. and strengthens the heart muscle. Although the quantity of iodine, bromine and phosphorus is small, so far as their influence goes they are of use. Brunton has pointed out that, because it nourishes the young epithelial cells of the bronchial mucous membrane, enabling them to grow instead of being converted into pus, it is of undoubted efficacy as an expectorant.

Thousands of lives would undoubtedly have been saved, had the profession understood that beef tea, as formerly made, containing scarcely more than the soluble extractives, possesses about as much value as a nutrient as urine. Shall we now go on to administer the extractives of cod-liver oil, cadaveric alkaloids of demonstrated poisonous properties—of which the best that can be said is that one is diaphoretic and diuretic in its action and increases the appetite—and discard the real y valuable constituents, which make up the food? A tuberculous patient can generate a sufficient amount of ptomaine without any assistance from the physician. It is the prevention of the formation, not elimination, that one seeks in treatment. An analogous procedure would be the administration of beef-tea made from putrid meat.

The use of the extractives of cod-liver oil is no new idea. In 1866 an extract, an evaporated watery extract, made from the livers in preparing the oil, was used. It soon fell into disuse. Granting that the ptomaines of putrid oil are harmless—which is as yet by no means proven, for the quantity in which they have been administered has been too small for any definite conclusion,—if there are any remedial properties in the extracts or wines it must be in the substances incorporated with them, but which are better administered separately.

How then shall we prescribe cod-liver oil? By emulsions, which are heavily charged with mucilage and contain water which favors rancidity? Of all which I have used—and every one which I could obtain has been used in my hospital and dispensary service—but one has been satisfactory, and that only when freshly made. For fourteen years I have used an oil of which the only recommendation it claimed was that it was obtained from fresh livers by cold expression. It was of American origin, and on that account was not obtained from the cod when in as good condition as when off the shores of Norway. As it was, its use was far more satisfactory than that of emulsions or mixtures of whatever sort.

During the past few months I have used with great satisfaction the Improved Lofoten Cod-liver Oil made by Parke, Davis & Company, which is simply an oil obtained on the site of the fisheries from the livers of the fish at the time they are taken from the water. The process of manufacture is carefully carried out so that absolute cleanliness and freshness of the material shall be secured and that no decomposition shall take place. The disagreeable odor and flavor is removed, but no constituent important for its use as a food is taken out. Specimens kept for months have as yet shown no change. The problem seems to be solved. A food to be of its highest usefulness must be palatable; the most weighty objection is now done away with.

The oil should be given during the height

of pancreatic digestion, one to two hours after eating, so that it may pass rapidly through the stomach and be absorbed during intestinal digestion. The stools should be watched that more shall not be administered than can be absorbed. If the oil should "repeat," a fact which I have not as yet observed, a few drops of ether added to the dose is likely to obviate that difficulty. The dose is from one to six teaspoonfuls. My conclusions are:

Cod-liver oil is a food, important because of its peculiar properties:

Since it is a food, no extractive can represent its value:

The purer the oil—the more free from cadaveric alkaloids—the more palatable will it be and the better adapted for its purpose:

The best that can be said of the cadaveric alkaloids is that they may possibly represent its eliminative, they certainly do not represent its reconstructive, properties:

It is not proven that the administration of appreciable quantities of the cadaveric alkaloids is devoid of danger.—Doctor R. W. Wilcox.

Physiology of the Carbohydrates.—In the Croonian Lectures for 1894 Doctor Pavy dealt a severe blow at the glycogenic function of the liver. In his introduction, Doctor Pavy first discussed the physiology of the carbohydrates, the dehydration of carbohydrates by physiological action, the destination of starch in the plant, and the origin of proteids by incorporation of carbohydrates. He then proceeded to sketch the steps by which he had been led to the conclusion that a carbohydrate could be obtained from the cleavage of a proteid body by chemical means available in the laboratory. Finally he arrived at a method of treating egg albumen which yielded a carbohydrate body readily soluble in water, yielding no coloration with iodine, and possessing no cupric-oxide reducing power. In his second lecture he commented on the glucoside constitution of proteid matter; showed that carbohydrate could also be cleaved off from the proteid by ferment action; and discussed the part played by the proteids in nutrition, and the conversion of carbohydrates into fat. The conclusions reached so far were to be summed up in the following: Not only can carbohydrate matter be hydrated by ferment and chemical action, but when in these conditions of increased hydration it can be transmuted by dehydration, under the influence of protoplasmic action, into substances having more complex molecules—amyloses: In both the vegetable and animal kingdoms carbohydrates take part in the synthesis o proteids: Carbohydrates are, under the influ ence of protoplasmic action, transformed int fat.

The acceptance of this position involve the abandonment of the glycogenic theory which taught that carbohydrate matter, ren dered soluble by hydration in the alimentary canal, was carried by the portal vein to the liver, there to be in part stored, and eventually permitted to escape from the liver into the hepatic veins, from which it reached the general circulation, and through it the systemic capillaries, for disposal in the tissues in some unknown manner. The theory was supported by the contentions: That the liver is more saccharine than other organs: That the blood leaving it contains more sugar than the portal veins: That the blood on the venous side of the systemic capillaries contains less sugar than on the arterial side.

All these statements had now been shown to be incorrect. It might, indeed, be affirmed not only that there was no support for the glycogenic theory, but that it was incompatible with the observed order of things in the animal economy.—*British Medical Journal.*

The Structure of the Palatine Glands.—At a meeting of the Pathological Society (London), Mr. S. G. Shattock exhibited a tumor of the palate which in structure resembled the growths of the parotid and submaxillary glands. This raised the question whether the palatine and labial glands in man were salivary. Mr. Shattock made a number of experiments by finely mincing gland tissue, triturating with weak starch solution, and then placing the mixture in an incubator at the temperature of the body. The results were tested by the action of iodine solution, care having been taken that any acid reaction of the glands had been originally neutralized. The presence of ptyalin was demonstrated in only a few instances—two children and one adult. The question has an interest from a dental point of view, for if the glands, or some of them, situated upon the hard palate should be proved to possess some amount of amylolytic function, they can scarcely act to the best advantage when a complete upper denture covers the roof of the mouth.—*British Journal of Dental Science.*

Migraine.—Ten drops of fluid extract Saw Palmetto has aborted many cases of migraine.

The Medical Age.

VOL. XIII. DETROIT, FEBRUARY 25th, 1895. No. 4.

Original Articles.

SIMPLE REMITTENT FEVER.*

BY DOCTOR JOAO VINCENTE TORRES HOMEM.

With us the malarial infection is usually manifested by a simple pyrexia of remittent type. Except the absence of an apyretic stage, in which the thermometer reveals a normal temperature, this nosological species does not show the slightest difference from intermittent fever. In a certain number of cases the fever, which was at the beginning intermittent, becomes remittent, and this ordinarily takes place when the patient is not properly treated or abandons the disease to the sole resources of nature. At other times we observe the converse; the pyrexia begins with the remittent type and after the use of a few doses of quinine the paroxysms become manifestly periodic.

There is nothing particular as regards ætiology and symptoms, in remittent that is not applicable to intermittent fever. In place of complete apyrexia, thermometric examination shows that there is barely diminution of febrile heat; this diminution is almost always one or two degrees (Centigrade) and appears from 6 to 8 A.M. or 3 to 4 P.M.; it coincides sometimes with the presence of some perspiration on the forehead and neck; but at other times, despite the lowering of the temperature, the skin remains dry. It is not rare for the fall of fever to take place in the early dawn, and thus to pass unnoticed by the physician and the persons who take care of the patient; if there is no perspiration to indicate the remission, and if the thermometer be not employed, the practitioner may be led into error, unless he is accustomed to observe the fevers of our country, especially if he attaches too much importance to the information given by the nurses.

To arrive at the diagnosis of simple malarial remittent fever the physician should pay attention, first, to the absence of any visceral lesion which can explain the febrile reaction present; second, to the results of thermometric investigation, which reveals a lowering of temperature of one or two degrees (Centigrade) at certain fixed hours; third, to the furred state of the tongue, the upper surface of this organ appearing as if it had been whitewashed;* fourth, to the congestion and sensitiveness of the liver and spleen; fifth, finally, in some cases, to the splenic pain to which Doctor Debové attaches so much importance. It is needless to mention the diagnostic value of the knowledge furnished by anamnesis, for this element dominates the entire history of malarial fevers, and is the first to sink into the mind of even the most inexperienced physician.

Simple remittent fever, once recognized at its commencement and suitably combated, terminates by recovery in a few days. After the first few doses of quinine, either the fever ceases at once, with the appearance of a fresh paroxysm, or the type of the pyrexia changes and the patient is attacked by one or two intermittent paroxysms before recovering.

After previously removing the gastro-intestinal disorder, which almost always exists, quinine is employed, in the dose of eighteen to twenty-four grains (one gramme to twelve decigrammes) at the time of the diminution of the febrile heat. In some cases the period of remission is so brief, so transitory, that the physician needs to be

*Translated by Surgeon Geo. P. Bradley, U. S. Navy.

*The translator would like to emphasize this point, which has not been much noticed in our publications. In his own experience it has proved an unfailing and important sign in all countries, and is particularly noticeable after a paroxysm or in chronic forms of malaria.

forewarned of the hour at which the temperature begins to lower in order to avail himself of this opportunity, and not wait for the thermometer to approximate more nearly the physiological degree.

Even after the fever ceases, the use of the specific treatment should be persisted in, giving the doses of the quinine salt at the hour when the remissions appeared, gradually diminishing these doses, so as radically to combat the miasmatic infection and prevent a fresh manifestation of its existence. The same precautions I have advised for intermittent fever should be taken when the type of the pyrexia is remittent.

The two following cases present two types of simple malarial remittent fever, where there was not the slightest difficulty in recognizing the nature of the disease:

Case 1.—Manoel Suzano, Portuguese, aged thirty-eight, recently arrived in Brazil, servant, lives in an unhealthful *cortico** of the Praia Formosa, where he fell ill on the afternoon of the 11th of June, 1872. Two hours after dining he was seized with a moderate chill, nausea, and afterward vomiting, rejecting the food he had swallowed; he went to bed, and an intense fever set in, accompanied by frontal headache. He took two cups of an infusion of laurel leaves and orange buds, convinced that he had an indigestion, and thus passed the whole night. The next day the fever and pain in the head continued, a dull pain appeared in the right hypochondrium, and the urine became very scanty and high-colored. The patient came on the 13th, at 7 A.M., to the Mizericordia Hospital and was assigned a bed in the Santa Izabel (clinical medicine) ward.

He presented the following symptoms: Face flushed; eyes a little injected; axillary temperature 102.6°; pulse 110 and strong; tongue much coated; anorexia, thirst, nausea from time to time; bowels constipated; epigastric sensitiveness; liver a little enlarged and painful on pressure and percussion; spleen normal; urine scanty, very high-colored, and free from albumen. The other organs in normal condition.

In view of the information given by the patient, saying that his fever dated from 6 P.M. of the 11th, without ever leaving him, I diagnosed malarial remittent fever. Recommended the internes to take his temperature at 1 and 5 P.M. Made the following prescription:

℞ Tartar emetic, 1 grain.
Infusion of ipecac, 8 ounces.

Half a glass every half-hour, and eighteen grains of quinine after action of emetic.

At 1 P.M., the patient being still affected by emetic, the thermometer indicated 101.5° F.; at 5 P.M., the dose of quinine having been given ten minutes before, it indicated 103.1°. At 8.30 A.M., 14th, 102° (eighteen grains of quinine); at 5 P.M., 103.1°. On the morning of the 15th, 100.8° (twelve grains of quinine at 8.30, and twelve more at 11.30 A.M.); at 5 P.M., 102.6°. On the morning of the 16th, 101.1° (twelve grains of quinine at 8.30, and twelve grains at 11.30 A.M.); at 5 P.M., 100°. On the morning of the 17th, 99° (twelve grains of quinine); at 5 P.M., 100°. This temperature persisted always at the same degree until the 22d, when the patient was discharged perfectly recovered, having taken quinine until the 20th (six grains the last two days) and *Agua de Inglaterra* (cinchona fermented with the must of grapes).

Case 2.—Luiz Bouças, Spaniard, aged forty, carter, suffered from intermittent fever, contracted in Andarahy Pequeno; had taken nothing except two purgatives, one of salts and the other of castor oil. On the 7th May, at 3 P.M., the usual paroxysm appeared, beginning with a chill which lasted half an hour. On the 8th, at 5 A.M., instead of the customary improvement, Bouças perceived he was still feverish and could not drive his load of forage to the city. He had pains in the legs, great heaviness of head, and burning of the eyes. He remained thus during the day, taking only a diaphoretic infusion and a foot-bath, which produced some relief. On the 9th May, 1893, he entered the Mizericordia.

On the 10th the patient presented the following symptoms: Marked febrile reaction, temperature 103.1°; pulse 98; great congestion of liver and spleen; tongue covered with a thick coat of slightly yellowish fur; great thirst and anorexia; belly doughy and painless. The previous afternoon the interne had verified with the thermometer a temperature of 101.1°, and had given a dose of twelve grains of quinine; which was promptly rejected by vomiting. I prescribed an emetic mixture for the morning, twenty four grains of quinine in two doses for the afternoon, and six wet cups to the right hypochondrium, four to the left. At 5 P.M., the first dose of quinine having already been given, the thermometer indicated 101.5°; on the 11th, at 9 A.M. it was 102°, in the afternoon 98.6° (eighteen grains of quinine). On the 15th the patient was discharged, with his liver still

*Literally, *hive*—a name applied to crowded and unhealthful tenements.

a little enlarged, but with a good appetite and without the slightest functional disturbance of the gastro-intestinal canal; he took quinine up to the 13th.

In this second case the fever yielded more promptly to the quinine than in the first, notwithstanding there having been previously a series of quotidian intermittent paroxysms, attended by congestion of the liver and spleen.

(*To be continued.*)

MEDICINE AMONG THE JEWS.

BY RABBI LOUIS GROSSMAN, D.D.

The fight between religion and science has been settled; the clergy, who are rarely graceful and never gracious in polemics, have had to make the *amende honorable*. They have submitted to the inevitable with a certain kind of suavity, which reflects credit at least on its tardy tact. On the other hand, it is refreshing to notice that the fraternity of scientists has given an anxious band of pastors a compensating surprise. Far from displaying a reckless skepticism or an unregenerate heterodoxy, which theologians were sure was implicit in scientific pursuits, scientists (especially unavoidable physicians) have been found to be neither irreligious nor irresponsible. On the contrary, an ingenuous deference has arisen between clergy and scientists such as doctors, whom they meet not infrequently in the conscientious performance of a helpful profession; each was dispossessed of prejudgments. The one came to see that polemics as to speculation was not so important, after all, and that solemn unction could not do much; the other found that bravado might be condoned in a beginner, but was unworthy of the mature and the earnest. Both found that they were not exclusive of each other; that, in fact, religion and science are supplementary one of the other. Some physicians, for instance, have displayed a heroism and a noble martyrdom in the cause of the world's good and progress, not a whit less grand and holy than that of mediæval monk or ascetic, perhaps in service somewhat more substantial. Science, too, has touched our aspects of life and has enhanced them, has made us more appreciative of life; has brought us into the presence of the majesty of organism, into the mystery of the cell, which is as profound and sublime as any theology tantalized us with. We see now the glories of creation not only through the illusive poetry of faith, but also in the very things with which we are busy in our prosy lives. The very dust at our feet is replete with meaning now. The search after God is now a holy business, not a barren ecstasy. The mediocre may indulge in indolent composure; but we know that they have only that modicum of religion which such listlessness in a world of living wonders can have. A loftier aspiration, however, an intellectual alertness, a hunger, an insatiable thirst to know, to see the beautiful— that alone brings truth, brings God.

Theologians and scientists are beginning to have respect for one another. A little misunderstanding is, after all, not an unmixed evil. Of course we all regret that this mutual distrust brought us so much mischief. The church cast out some of its most valuable men, and made enemies of them, whereas these might have been its profitable helpers. Religion got into ill-repute and the churches were shorn of their most efficient servants. Theology is, in itself, a very respectable bit of earnest poetry, but its magnificence was cheapened by the fuss of babblers who had more zeal than love. Still we are glad that the mischief these did was in the end not irreparable. Men of inventive idealism in a real, not fantastic world, must inevitably enrich mankind some day. The delay to let sound judgment, exercised in a sound world, prevail, was expensive to us all, to be sure; but we are over "the late unpleasantness" and willing to let "bygones be bygones." Perhaps there was a compensating good in it. Both have gotten the wholesome lesson of moderation. We extend hands to each other for comradeship, and we can begin some sort of concerted action. Thoughtful people were all along heartily ashamed of the indefensible obstinacy which zealots supposed to be ardor, and they knew there was enough of usefulness on both sides—on the side of the Voltaires and the Buechners as much as on the side of the Jonathan Edwardses and the John Calvins; and perhaps they would have liked to unlearn history. But we really need be ashamed of nothing. The doings of Providence are justifiable at

all times, and only those find fault or apologize for them who look from the wrong side. Fanaticism is an unavoidable disease, and all of us must get through with it; the cradle of science has been rocked not more lovingly nor more passionately than the cradle of religion. The early fostering of both was intense, but crude. At any rate, untamed power must learn its limit. You may put a Bible into the hands of a boy, or you may give him an Aristotle's Metaphysics, the boy will be nevertheless neither wiser nor better; he still remains a boy. I shall never blame scientists for having been enthusiastic; a good cause ought to intoxicate those who drink at its source. Exuberance of spirit is perhaps the only capital which pioneers have.

The hygienic significance of a day of rest is not the least of the points made by the churches for securing a respect for any observance of the Sabbath. It has not been made out as yet that the continued strain of a week's labor does not act deleteriously on the health of the organism; and even the laity feel that just as virile exercise of the functions in a methodic manner is an absolute necessity, so also an incessant and unrelieved slavery of the organism entails functional exhaustions, and that a host of general diseases, such as consumption, diabetes, etc., may have some germinal source in continuous labor, which taxes with an equal amount of force-expenditure the heterogeneous organs, which have various degrees of reactive power and may thread out in energy therefore in unequal ways. The Day of God, consecrated by biblical tradition, is still the most eminent instance (not only the most ancient) of a prophylactic institution of social hygiene.

In fact the Decalogue gives hints of the fact that Moses was not only a discriminating connoisseur of the niceties of speculation, passion, and will, but that he also was sagacious in matters of public interest and public necessity as to life and health, which, if left to even the best-intentioned whim of the individual, it would be hard to conserve. The only way in which religion can substantiate its claims on the good will and the good sense of the people is when it proves that it helps them in an organizing, a constructive, a statesman-like manner to maintain and to promote the healthy life of the largest number of the people.

I think some day we shall sit in judgment on the founders, as well as on the advocates, of religion, and award to them not simply admiration for personal charms of intellect or pathos, for pleasing us æsthetically or philosophically; but we shall endeavor to make out for ourselves how much they knew of the social significance which is inevitably implicated in large movements and in world-action. It is not the least interesting bit in the biography of Moses and Jesus, and in the legendary account of even the humblest Messiah of African and American aborigines, that they were medicine-men, and it is our privilege to put not only a new but a more appreciative estimate on their fame, if we shall make clear to what extent they thought of the health of the body, strove to arrange social conditions so as to bring a salutary effect on the vigor of the average man and woman, and to what efficient use they turned religion for hygienic profit and for the permanent health of the race.

The Pentateuch comprises sanitary arrangements, the emulation of which, though they are rudimentary, would do no small credit to our own more progressed time. Moses knows, for example, of the disinfecting quality of the soil; he knows of public sanitation; he knows of the great danger to public health which lies in the negligent exposure of offal and of putrid stuff. "And a place shalt thou have without the camp whither thou shalt go forth abroad. And a spade shalt thou have with thy weapons; and it shall be that when thou sittest abroad, that thou shalt dig therewith and shalt afterward cover that which cometh forth from thee." (Deut., XXIII, 13–14.)

In Leviticus a number of what are called leprous diseases are enumerated, from the spread of which there is a constant danger to a community (13, 2–3). The priest is told to make a diagnosis—think of it: a diagnosis, and that made by a priest! And this is no mean diagnosis, I think. The language is quaint, but we can make a very sensible meaning out of it. The patient is brought before the priest; this one inspects the obvious symptoms. The hair about the wound, or lacer-

ated or erupted part—is it white (has it lost its pigment)? Is the affected portion sunk deeper than the surrounding—in modern technical phraseology, is there a degeneration of cellular tissue? The priest is to declare the patient unclean, and he is to be isolated for seven days. At the expiration of this enforced "isolation" the priest-doctor subjects the patient to another diagnosis. If the erupted part has become pale—that is, if the recuperative energy has failed and there has been no reconstruction of the tissue—then it is fair to presume that the circulatory system either has become impoverished or has failed. He is unclean; it is an eruption. He must then, after the issue of his disease, perform ablution, offer a sacrifice—a solemn seal to a matter which would be conceived of more light-mindedly if it had the sanction of the utilitarian aspect alone.

The patient who has been found really affected tears his clothes, uncovers his head, and cries: "Unclean, unclean!" (a better placard has not been invented). "He shall remain solitary without the camp." When ready for disinfection and for restoration to the camp, he washes his clothes, cuts off his hair, bathes in water, and still remains seven days longer outside of his tent. On the seventh day he repeats the ablutionary procedure, and then at last he may be held as *clean.*

We have here primitive inspection, isolation, quarantine, disinfection. But there is more—Moses knew of infection, contagion, and, I say boldly, of disease-germs. If the priest had discovered a sign of leprosy (such!) on any garment of wool, linen, or leather, or any other wearing apparel, the suspected garment had to be kept apart, to be reëxamined after seven days (it was in the days when the industrial arts were in their infancy, and none could afford to destroy expensive garments). If the traces of suspicion had then enlarged, it was leprosy. "When the plague of leprosy is on a house of the land of your possession, then shall he that owneth the house come and tell the priest, saying, Something like a leprosy hath shown itself to me in the house. And the priest shall command that they clear out the house, before the priest shall go into it to see the plague, that all be not made unclean that is in the house [a commendable prophylaxis, which modern physicians can afford to heed who pass from venereal patients to diphtheritic ones, and from harmlessly afflicted to the most criminally afflicted without much scrupulous forethought!] and after this shall the priest go into the house. And he shall view the plague, and behold if the plague be in the walls of the house, in depressions [chinks, we would say], dark green, or dark red, and their appearance be deeper than the wall [that is, lying in spots not so easily detected],* then shall the priest go out of the house to the door of the house and lock up the house seven days. And the priest shall come again on the seventh day, and if he see that, behold, the plague has spread in the walls of the house [how ancestral the bacteria theory is!], then shall the priest command that they break out the stones on which the plague is, and they shall cast them forth without the city in an unclean place. And the house he shall cause to be scraped within round about, and they shall pour out the rubbish that they have scraped off without the city in an unclean place.† And they shall take other stones and put them in place of these stones, and the mortar he shall take [Moses seems to fear the treacherous pores in lumber, stones, and brick] and shall plaster the house afresh. And if the plague come again and break out in the house, after he hath taken away the stones and after the house hath been scraped and after it hath been plastered, then shall the priest come, and if he see that, behold, the plague hath spread in the house, it is a corrosive leprosy in the house, it is unclean. And he shall break down the house, and the timbers thereof, and all the mortar of the house, and he shall carry them forth to without the city, unto an unclean place. And he that goeth into the house all the days that it is locked

---

*If our Health Board had been a little more pious, and had read their Bible before they sent out the contractor to build the Eruptive Disease Hospital, lives would have been saved.

†We in our day could emulate the biblical example with much profit. I have a suspicion against the conventional papered room and against oiled walls and against the dangerous absorptive coatings of ceilings and walls. A scraping here and there would harm very few modern households!

up shall be unclean until the evening. And he that lieth in the house shall wash his clothes (so also he that eateth in the house)." Finally, after a sacrifice (to give religious sanction and prestige to the very important work) "the priest shall take [notice this provision, a quite creditable if not absolutely effective process of disinfection] cedar wood and hyssop, and the scarlet yarn and the living bird, and dip them in the blood of the slain bird [the sacrificial animal] and in the running brook, and sprinkle on the house." (In other words, the disinfectant is a mixture of vegetable and animal matter: vegetable matter as a preservative, hyssop as a deodorizer.) In Chapter XIX it is provided that a stock of disinfecting fluid be kept constantly on hand.

The greatly offending but embarrassingly small animalculæ and most modern microbe miscreants, we find, are old familiar acquaintances of Moses. I depone as a layman, that the ancient lawgiver (or for him and in his name somebody later, but not less sagacious) knew a thing or two about medicine and diagnosis and of those esoteric matters of which you know expertly both the grand importance and the social significance. Moses had no microscope, but he had a superb instinct and a keen, watchful, and conscientious eye on the traditions and experiences of the world.

The best known Jewish provision as to hygiene is that of circumcision. I wish more time and better information were at my disposal to speak of this great tradition in Judaism. I must be concise and content myself with making laical statements about it. The purpose in this surgical operation, I take it, lies in a subtle ambition to combat the terrible curse of venereal disease, or, to put it in a more positive phrase, to come to the rescue of an undisciplined passion which is the germ of the legitimate and inevitable function of propagation. The great value of circumcision lies, it seems to me, in the first place in the fact that the removal of the foreskin reduces the sharp craving by early exposure, and the consequent early hardening mitigates the provocation to venereal indulgence; in the second place, the freeing from an unnecessary tegument relieves the duct, which otherwise might be hampered; in the third place, it accommodates cleanliness and has an all-around prophylactic importance. It is a fact that as long as the modern Jews respected this traditional custom of circumcision (disrespect to it is rare, even in these days) they had a fortunate immunity from the decimating and noisome diseases and vices; the small number of cases of congenital disease, and the infrequency of insanity, can be traced among Jews to this initial precaution.

Perhaps also we ought to put our moral estimate upon the sexual instinct from the sociological standpoint. The passion is not a gift of the devil, but a function, which can be (and we shall some day see, must be) in the service of what is valuable and chaste in the race. The perpetuation of life, the sanctity of marital cohabitation, and all the virtues and worthy delights which come from home and through home, all along the progressive line of childhood and parenthood, are brought to all of us and to all who come successively upon the earth to share in its life and its pleasures and in its rich unfolding of beauty, of truth and goodness, by the pure and healthy way in which we have empowered man and woman to minister in this world-maintaining function. There is no higher aspiration in mortal man, in prophet or in statesman, to serve his race better and more enduringly, to the unfailing reward of immortal fame in the midst of a thoughtful mankind, than to succeed in giving us such a doctrine, law and custom as shall endow the lowest of our passions with an ennobling significance, and by his tact and his discretion and his legislation to raise our organic necessities and defensible indulgences into holy and beneficent functions.

We are prudish, nowadays, despite our intelligent convictions. We know that something must be done in order to breed a better, a sturdier race; but we are oversensitive, we trip up our modest feet. The facts stare every observer in the face. The immorality of the present day, the laxness, even in circles in which fidelity and confidence before were intense, and the scandal of irresponsible womanhood and manhood (which latter is often allowed a riotousness which even the refined members of society agree not to speak of), have so inured us to reserve and extreme distrust, that agitation in the matter is simply impossible; the handling of a sweeping-broom and the dusting of a garbage-wagon are

unæsthetic bits of business to which we will always stoop ungracefully and unwillingly. But think of this! Moses promulgates a law in Israel as to the sexual instinct, and Jewish tradition enforces it with publicity, and still, despite the unæsthetic and plain publication of it, the moral sense of no Jew all along has ever been shocked by it, nor has his passion been whetted by it; nay, he has rather been chastened by it. How much we modern people of etiquette and formalities can learn from the rugged and natural sense of the ancients, and how have even the leaders of our religions fallen from the grand heights of prophets not only in idealism but also in practical sense!

I have not spoken of the marital laws, which come more properly under the care of the physician than under the speculation of the theologian. These, too, deserve a fuller treatment, and I regret that I must satisfy myself with simply referring to them with a fugitive but respectful notice. Perhaps a considerable number of necessary divorces can be accounted for on other than church lines, and it is not improbable that if our legislators, who are theologically conditioned and churchily prepossessed more than they are aware (because opinions are matters of instinct as well as of training), would inform themselves of the sociological sense of law, they would be readier to clip the wings of freedom in some cases, and slower in others to weight them down.

One provision of the Mosaic dispensation is worth a special remark. Moses provides that a man who has recently married a woman shall not go into war within one year after his marriage. Moses knew that the soldiery constituted the most virile part of the people, and he wished to conserve the sturdy quality of their reproductive capacities. What wars have done toward depriving the nations of their most healthful stock and of the vital germs of other possible lives, we can surmise.

If you wish to have additional instances of the way in which Moses economized life and germ, both mature and infant, read Chapters XV and XVIII of Leviticus. They are replete with precautionary measures of such obvious truth as to physiology, hygiene, and implied morals, that we do not know which to admire most, the versatility or the ingenuity or the organizing power of the man, leader, prophet.

It is possible that much of that which is now ascribed to primeval Moses is really a tradition which accumulated through the history of the race and acquired a growing prestige and influence. This would involve questions of literary criticism and of historical precision. It would in no way affect the value of the matter we have spoken of. The people of Israel maintained the provisions, and obeyed, not only voluntarily but also advisedly and to the degree of religiousness, the wise and helpful (I might almost say necessary) laws; if they liked to make them more august in repute by ascribing the origin of them to a great man who lived, or who was thought to have lived, long ago, *that* they had a right to hold as they felt piously inclined to do. But it is an unquestioned credit to the people of Israel that these laws and customs were held in great esteem by them, and that, in spite of the skeptical touch which every later century puts upon every antecedent one, they continued uninterruptedly with undiminished fidelity to conform their personal and communal interests and needs to these traditions Here the history of Israel has a feature of interest and of worth to posterity.

(*To be continued.*)

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page* 77.]

Although I have taken up so much time with an account of the School of Salernum, a few words must be devoted to the School of Montpellier, which was second in time and in importance among the great influences in the culture of Western Europe. There was a time when to have studied there lent a special halo of glory, for, being near the sea and in the vicinity of thermal baths, even so early as A.D. 1153 it was famous as a school

*Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

of medicine; moreover, those who presided over it did not lapse unconditionally into the church or into mediæval philosophy with its bewildering subtleties. It is said to have been founded A D. 738, but first mention of it as a source of med cal education occurs in 1137, when Bishop Adelbert II., of Mayence, visited the city to listen to its medical teachers. A faculty of philosophy was added in 1242, and one of law in 1298. Within the walls of the city sojourned both Christians and Jews, the latter being subject directly to the civil authorities, and particularly esteemed as translators. One of the most famous of the sons of Israel was *Profatius Judicus*, who became a rector of the faculty.

Prior to 1370, when the university became subject to the kings of France, it was under the control of the Pope; and then, as now, the school of medicine was the chief ornament of this ancient seat of learning.

One of the most illustrious and famous pupils of Montpellier was that religious mystic and alchemistic visionary, Raimond Lull, or Lulli, a would-be transmuter of metals and seeker for the philosopher's stone. Born in 1234, at the age of thirty he began to see visions, and was thereby roused from an atheistic tendency to soon become wonderfully pious; ultimately he entered the order of Minorites, studied Arabic, and appeared as a missionary in Africa, seeking to convert the Saracens—who, however, declined the honor and finally (in 1315) rewarded his zeal by stoning him to death. Beside works on alchemy and theology, he wrote on medical subjects, and, like all great minds of the period, passed among the common people as a sorcerer in league with the devil. Nevertheless he was a notable figure in his age and country.

Quite celebrated became the compendium of Gilbert of England (1290), which contained the same speculative nonsense, the same polypharmacy, and the same superstition as other works of that time; what little it contained of value was taken largely from other writers. While this Gilbert, often known as Gilbertus Anglicus, was not the first English writer on practical medicine, he was the earliest whose works have been preserved.

Still more famous was John Gaddesden, physician in ordinary to the King of England, professor in Merton College, Oxford, who wrote the famous treatise known as "*Rosa Anglica*," which appeared between 1305 and 1315. This treatise was characterized by mysticism and disgusting therapeutic measures, and tainted by medical avarice, superstition, and charlatanry. Gaddesden was perhaps the first to formally recommend the "laying on of hands" by the king for the cure of scrofula (first performed by Edward the Confessor, 1042–1056), whence comes the ancient name for this disease, *i. e.* "king's evil "*

Arnold de Villeneuve (1234–1313) studied seven years at Montpellier, twenty years at Paris, visited all the universities in Italy, then went to Spain to levy on the Arabian authors He wrote on medicine, theology, and especially on chemistry—in which art he obtained great renown both as an author and teacher. To him is due the discovery of spirit of wine, oil of turpentine, aromatic waters, besides several preparations of less note, and the introduction of chemical compounds into therapeutics. His was a very stirring life, for he traveled extensively; he became a teacher at Bologna, and physician to Peter III. of Arragon. Shortly before his demise he went to Paris, having fallen under the ban because of a declaration that papal bulls, far from being sacredly inspired, were human works, and that acts of charity were dearer to God than hecatombs, etc. He finally perished by shipwreck, but the spirit of fanaticism followed him after death, for his volumes were condemned by the Inquisition, because they promoted experiments rather than mere speculations. In spite of his general honesty, in accordance with the spirit of the times he inculcated deceit in medicine, and one of his declarations is: "If thou canst not find anything in the examination of the renal secretion, declare that an obstruction of the liver exists. Particularly use the word 'obstruction,' since it is not understood, and it is of great importance that people should not understand what thou sayest." He was one of the first to administer brandy, which he regarded as the elixir of life—whence the modern "*Eau de Vie*."

---

*A special "Service of Healing" was used in the English Church under Henry VIII., 1484–1509.

Connected with this school also, or well known as having studied there, were many men whose names became more or less famous: among them John Arden, who settled in London about the middle of the fourteenth century; Vinario, a contemporary of Guy de Chauliac; and the well known surgeon and anatomist Henri de Mondeville, who was a teacher of Guy de Chauliac. But an idea of the doctrines prevalent in the medical literature of this part of the world, at this time, may be had from the fact that most writers chose titles for their works after the style of ballad-singers; for instance, those describing the plague and venereal diseases were called "*Flowers and Lilies of Medicine;*" the "*Rosa Anglica*" of John Gaddesden was another example. Matters had arrived at such a pass, indeed, that men of science no longer hesitated to confess superstition and mingle it openly with deceit, to oppose the interests of the most needy, and to extort from their fellow-creatures fees in proportion to their supposed ability to pay.

In the time of Charlemagne each cathedral possessed a school in which were taught arithmetic, theology, singing, and sometimes medicine; the episcopal college had medical teachers who gave advice and dressed wounds at the doors of the church of Notre Dame, Paris; but when the medical profession had been divorced from the sacerdotal, by councils and popes, many of these cathedral schools closed. In order to preserve the jurisdiction which they for a long time had exercised over the learned professions, many were erected into universities, and thus the clergy gave instruction in philosophy, theology, and later in medicine. During the thirteenth century arose many of the great universities in Europe, notably those of Bologna, Padua, and Naples, in Italy; of Paris, Montpellier, and Toulouse, in France; of Valencia and Tortosa, in Spain; of Oxford, in England. Pope Innocent III. by papal bull guaranteed that the professors and students at Paris should be exempt from all excommunications save those which emanated directly from the Holy See; French sovereigns conferred many privileges upon the universities, and soon the members of the University of Paris formed practically a second city, with its own laws, customs, police, citizens, and magistrates. Still, however, all science belonged to the clergy, and its teachers, though removed from the cloister, were none the less Roman Catholic, so that the popes reigned over the people through the parish clergy, and over the latter by the clerical teachers and professors. Nevertheless, in all candor it must be acknowledged that these studious men, thus associated together for mutual instruction and emulation in learning, contributed in a large measure to elevate Christian civilization above all others, though several generations were required to secure results calculated to make men celebrated; hence the early periods of the universities developed very few names. Many were conspicuous by their love of instruction, but not by originality of research. Men undertook expensive and wearisome voyages without encouragement or hope of reward, simply to obtain some rare manuscript or to hear some renowned professor; and they appeal to us of the nineteenth century by their devotion, if not by the results of their work.

Among the somewhat scattered and more or less eminent men of this period was Gerard, of Cremona in Lombardy, a man of great purity and studiousness, who arduously pursued all that Latin authors could teach him, and, not being able to procure in Italy certain manuscripts which dated from the time of Ptolemy, determined to go to Toledo in search of an Arabian translation. At this time he was unacquainted with Arabic, but soon mastered it, and, armed with this powerful resource—which no other physician had possessed since the time of Constantine the African—he could not see so many Arabic works devoted to all branches of science as were gathered at the Spanish University, without a desire to translate and transmit the same to his own country; hence he gave the remainder of his life to this work. He rendered into Latin the treatises of Hippocrates and Galen, of Serapion, and of all the famous Arabian authors from the time of Rhazes, including the Canon of Avicenna and the work on surgery by Albucasis. He died at the age of seventy-three, in 1187, at Cremona, and left all his books to the monastery of St. Lucy, within whose walls he was buried.

William of Salicet, born at Plaisance in the first years of the thirteenth century, became a professor in the University of Bologna, and later at Verona. He wrote extensively on medicine, and earned a reputation as a surgeon that preserves his fame to the present day. It is claimed that his status in medical literature depends in large measure upon the fact that he was perhaps the first to refuse slavish obedience to preceding authors—preferring, instead, to draw upon the results of personal study and experience. He died in 1280.

Lanfranc, or Lanfranchi (according to whether one prefers his French or Italian name), studied under William of Salicet. Of his early life very little is known, save that he practiced surgery in Milan at the time of the great dissension between the Guelphs and Ghibellines, and, attaching himself to the weaker party, was exiled and forced to seek an asylum in France; he resided in Lyons for several years, and here wrote a work on minor surgery; in 1295 he went to Paris on the invitation of the faculty of medicine, opened a course on surgery which met with great success, and then published a second and larger treatise on the subject. It is said of him by Malgaigne that, less from his fault perhaps than that of his age, after his death (about 1315) surgery began to decline. From the time of Brunus, who practiced in Padua in 1250, the barbers had done the scarifying and bleeding. After the time of Lanfranchi there were others who applied leeches and often cauteries, and even the women meddled with surgery and in all operations competed with the barbers; the lay surgeons held themselves rivals to the clergy. Lanfranchi inherited from his old master, William, an aversion for them all, and often had to contend with uneducated and incompetent laymen. Clerical surgeons regarded operations as beneath their dignity; and Lanfranchi, who deplored this condition of affairs, confessed he had sometimes bled with his own hands, but had never operated for ascites, hernia, cataract, or stone.

John Pitard has descended to fame, not as a writer but as the founder of the surgical schools of St. Come and St. Damien, which occupy so eminent a position in the surgical annals of France. In 1306 he was surgeon to the King of France, Philip le Bel, and the sworn surgeon of Chatelet. The college of St Come, in 1311, was only a little brotherhood of lay surgeons, who gradually grew in importance as the result of the obstinate struggles sustained—on the one hand against the faculty of medicine, and on the other against the barber surgeons. Malgaigne has with great patience and clearness shown that the importance of this body of men has been greatly exaggerated by historians; he has traced their various turns of fortune from beginning to end; I shall have occasion to consider them again further on.

Mondino, sometimes known as Mundinus, born in 1275, became a professor in the University of Bologna, and died in 1327. He was the author of a celebrated treatise on anatomy, said to have reached twenty-five editions, and which was the first of its kind since Galen. This science had been greatly neglected: in Salernum, for instance, they were for a long time contented with the treatise of Copho on the anatomy of the hog, and most of the anatomical knowledge of the age was apparently derived from this source; Mondino resurrected the study and pursued it with interest and enthusiasm, though under the greatest difficulties. His works for more than two centuries, along with the writings of Galen and the Arabic authors, served for anatomical demonstration, although very incomplete—as witness the statement:

> Beneath the veins of the forearm we see many muscles and many large and strong cords, of which it is not necessary to attempt the anatomy on such a corpse (*i.e.*, a recent one), but on one dried in the sun for three years, as I have shown otherwise, in developing the number and the anatomy of those of the superior and inferior extremity.

On the other hand he took the opposite course to discover and demonstrate the nerves, and advised maceration in running water. It required almost superhuman boldness to substitute demonstrations on the human cadaver for those upon swine, yet this was done by Mondino; and at the time the prejudice against dissection was so general that for more than a century after Mondino—who died in 1327—no one dared, at least publicly, to emulate his example. It was in the year 1315 that he probably dissected the bodies of

two women in Bologna. Anatomical study was further complicated at this time by certain bulls of Pope Boniface VIII., forbidding evisceration or boiling or cooking any part of the human body; these deliverances were really aimed, not against scientific investigation, but at the absurd custom introduced by the Crusaders of cutting up and boiling the bodies of their relatives who died in infidel countries, in order to send them home for burial in holy ground; nevertheless, the papal injunction certainly operated to discourage and prohibit anatomical dissection, since nearly 200 years later the University of Tübingen was obliged to apply to Pope Sixtus IV. for permission to authorize dissection.

Guy de Chauliac, born in Gévaudan about 1300, was the most famous physician and surgeon in Christendom during the Arabic Period. He studied at the cathedral college of Mende, which at that time was quite celebrated, and was taught medicine at Montpellier under the best masters of his day. It is probable also that he studied in Paris, and certain that later, in Bologna, he saw dissections made. Dissatisfaction with the writings of the ancients and the knowledge which he obtained at the schools, stimulated his own powers of observation, and he became in every respect an original student and acquired a degree of erudition far more extended than that possessed by any of his contemporaries. He practiced in various places, longest at Lyons; and finally entered the service of Pope Clement VI., at Avignon, and probably enjoyed the same honor under Innocent V. and Urban V.; when the latter was made pope, in 1362, De Chauliac became his chaplain, or chapel reader. In 1363 he published a work on surgery called "*The Inventory*," upon which his fame chiefly rests, though several other volumes emanated from his pen. None knew better than he how to unite respect for the ancients with justice toward contemporaries, and he cited a large number of Greek, Arabian and Latin authors, some of whom are now utterly unknown. The sciences, he declared, are "created by successive additions; the same man cannot lay the foundation and perfect the superstructure. We are as children carried on the neck of a giant; aided by the labors of our predecessors we see all that they have seen, and something beside." In tracing the character of a surgeon he recommends that he be "learned, expert, ingenious, bold where he is sure, timid when in doubt, avoiding bad cures and practices, being gracious to the sick, generous and compassionate, wise in prediction, chaste, sober, pitiful, and merciful; not covetous nor extortionate, but receiving moderate fees according to the circumstances of his patients, the character of the case, and his own dignity." "Never since Hippocrates," says Malgaigne, "has medicine learned a language stamped with such nobility and in such few words." Although a follower of Galen, in anatomy he insisted on the necessity of dissection, and proposed to make use of the corpses of executed criminals for this purpose. The drawings made by Henri de Mondeville were known to him; he divided abscesses into hot and cold, although among the latter he included œdema, tympanites, dropsy, scirrhus, and other conditions. In practice he was more timid, yet more active, than Lanfranchi, who never cut for stone but left that operation to the traveling surgeons.—De Chauliac described it as he had seen it performed; he opened the abdomen for dropsy, did not hesitate to attempt the radical cure of hernia, and operated for cataract. The plague which raged during the fourteenth century and depopulated the known world of one-fourth of its inhabitants, twice appeared in Avignon while Guy de Chauliac was a resident there—and he acknowledges that nothing but shame prevented him from fleeing. He remained at his post, visited the sick, and was himself attacked and left for dead. "In this frightful position he had sufficient presence of mind to follow the peculiarities of his case, analyze his own sufferings, and to give a description of them worthy of Hippocrates." (Renouard.) His work soon became the surgical code of Christendom, and was commented upon and translated into all tongues, remaining for a long time a classic, and even at this day it preserves much of its interest as representing the condition of medical science at the close of the Middle Ages; moreover, its literary style was much superior to that of any of his contemporaries, all of whom wrote very barbarous Latin. He died about 1370.

With the death of De Chauliac terminates our interest, not merely in the Arabian physicians and those who were intimately connected with them, but in the so-called Arabic Period. It may be added, in passing, that the followers of Mahomet, like those of Christ, erected by the side of each of their mosques a school, and often a hospital endowed with more or less generosity by caliphs or the wealthy, who hoped to purchase redemption and eternal happiness by such liberality.

A certain number of religious orders or communities were established during the Middle Ages to give succor to the deserving sick, the most widely known being those of St. Mary, St. Lazarus, St. John of Jerusalem, and the Daughters of God. To be sure, some, through the endowment of the opulent, became rich beyond all reason and departed from their primitive purposes, and thus not only excited the covetousness of monarchs but had even the temerity to resist their authority. This compelled, every now and again, a suppression of some order or institution—partly, perhaps, for laxity of morals, and partly because of their turbulence. Of this period it may be said that charitable zeal for the sick was never more pronounced; princes, bishops and popes gave examples of devotion by dressing with their own hands the ulcers of lepers—and leprosy was in those days a frightful disease, having been contracted by the Crusaders in the Orient, and everywhere spread as they returned, being moreover favored by the miserable uncleanliness which was then so common. Ignorance, dread and fear rendered this disease worse than usual, and it was confounded with other maladies less formidable. It has been estimated that in the fifteenth century Europe harbored no less than 19,000 lepers; and that the disease was a great terror is manifest by the excessive caution taken against its spread: its victims were forbidden to enter cities, and on the highway were compelled to turn aside lest they should taint passers-by with their breath; even a healthy person convicted of being touched by a leper was banished from society; any infraction of these rules was punishable by death. It will thus be seen what depth of genuine humanity it required to have anything to do with one of these outcasts.

Another institution prevailed widely during these days—namely, public baths, which were established in nearly every city and increased to such an extent that in the fifteenth century the bathers of Paris constituted a powerful brotherhood—so powerful, in fact, that Jacque Despars, physician to Charles VII. and one of the most renowned professors of the faculty, for speaking openly against the abuse of public baths was obliged to leave the capital to avoid persecution.

Study of the general history of the Arabic Period reveals that the Arabs, previously obscure and uncivilized, emerged rapidly from the demi-savage state and took the first rank among the polished nations of the world. During the earliest portion of this period these people were religious vandals and destructive fanatics, but later embraced with enthusiasm and persistence a study of the humanities, and endeavored to repair their early ravages by collecting the débris of the literary and scientific monuments of Greece; but though they cultivated medicine with zeal and success, they added little to the Greek treasures. Later, Arabia was overrun by hordes from the deserts of Tartary, a people yet more barbarous and unknown, who established themselves in all parts of the globe then under Saracenic dominion, and by their brutal despotism degraded the Arabians to a condition approaching that from which they had emerged.—This seems to have been ever the result of Turkish conquest.

Meanwhile the Greek nation, which was for so many ages at the head of civilization, gradually lost its power, virtue, courage, glory, and independence, and continued to descend until now it exercises no influence whatever on the course of events. During the course of the Arabic Period only one Grecian physician merits mention on account of his writings, and in these there was nothing new except what he had borrowed without credit from the Saracens.

The Empire of the West—that is, the western part of the ancient Roman Empire—after subjugation by barbarians from Germany and Scandinavia, fell under a cloud whose darkness overwhelmed it. Its people, however, gradually received new life by commingling their blood with that of the

invaders. Later they were able to repulse the Saracens who poured in upon them from Spain; then they turned their armies against each other, and wrought mutual havoc and ruin for several centuries. Again, roused by religious fanaticism, as had been the Mohammedans previously, they rushed by thousands upon the plains of Asia Minor, Syria, and Egypt, which had been for centuries occupied by the Arabs; and their adventures and enterprises, and the new and varied scenes through which they passed, gave rise among the "Francs" to some taste for poetry and works of imagination. During the twelfth and thirteenth centuries governments became more stable, liberal institutions were created, the rust of ignorance gradually disappeared, and by the end of the Arabic Period there were really apparent brilliant streaks of mentality in the horizon of the nations of Europe. In this progressive movement the study of medicine shared. In the thirteenth century it was worthily represented in Italy, in Paris, and became established in Montpellier. Notwithstanding, up to this time physicians apparently only knew how to timidly follow in the track of the Arabians, and approached little or not at all, in their studies, the purer lore of the Greeks.

The Age of Renovation, according to Renouard, is divided into two periods—the "Erudite," comprising the fifteenth and sixteenth, and the "Reform," embracing the seventeenth and eighteenth centuries—and in fact I think the latter should embrace the present century. In general the literature of this age is known as that of the "Renaissance," of the beginning of which a great deal has been written.

At the commencement of the Erudite Period, Arabic literature still predominated in medicine. Rhazes, Haly-Abbas and Avicenna were universally invoked and explained. But a taste for Greek literature began to prevail in the universities of Italy, and was finally extended to every part of Europe, especially after the taking of Constantinople by Mahomet II., Emperor of the Turks, in 1483. This disaster, which at first bade fair to be a mortal blow to Greek literature and language, strange to say served only to hasten their resurrection in the Occident. Constantinople having been given over to pillage at this time, most of its learned men escaped, carrying with them all manuscripts that could be seized; most of these found refuge in Italy, and enlightened protectors in the all-powerful prince of the house of Medici, in Florence, in the popes at Rome, and in Alphonso of Arragon, King of Naples and Sicily. Everywhere these fugitives spread the knowledge of the *chef d'œuvres* of Greek literature and art, and in this way a taste for books, libraries and sound erudition was diffused, while the Greek and Latin classics were hunted up and published with great patience and ardor; thus the works of the old writers were edited, translated, commented upon, and everywhere disseminated throughout Europe.

Among those who devoted themselves to the thankless task of editing, and purifying from interpolations, the works of the classic writers, was Nicholas Léonicenus, born near Vincenza in the year 1428, who studied medicine at Padua and taught it for more than sixty years at Ferrara. He possessed great vigor of mind, with purity of manners and serenity of soul, and was the first to translate directly from Greek into Latin the aphorisms of Hippocrates and portions of the writings of Galen. He combated in every way the infatuation of his contemporaries for the Arabians and their lore, and called attention to many of the errors of men who, like Pliny the naturalist, had fallen for lack of fully understanding the Greek authors they compiled. At the ripe age of ninety-six he died, regretted by all.

Thomas Linacre, of Canterbury, a contemporary of Léonicenus, though younger (1461–1524), studied first at the University of Oxford, went to Italy in 1484, and in Florence attracted the attention of Lorenzo de Medici, who made him the companion of his own children, to whom he gave the best possible advantages. In due time he returned to England, where his talents speedily won him high station, and he became physician to King Henry VIII., and later to Queen Mary. Linacre was the first Englishman, it is said, who spoke purely the language of the Romans. He translated several books of Galen, that are still esteemed; and caused the founding of two chairs, one at Oxford,

the other at Cambridge, whose incumbents were charged with the duty of explaining the works of Hippocrates and Galen. But he is most entitled to the gratitude of his countrymen for his influence in founding the College of London. To appreciate properly its importance and his merits we must remember the obstacles that had to be surmounted; for at that time bishops alone had the right to accord, in their own dioceses, permission to practice medicine, and consequently the healing art was abandoned entirely to monks and illiterate empirics. It was well that Linacre had influence at court, else he could never have obtained the reform of such overwhelming abuses; but he triumphed in spite of powerful opposition, and secured the issue of letters patent which prohibited the practice of medicine by any one who had not received a degree in one of the two universities in the Kingdom, and been examined by the president of the College of London assisted by three others. This was the achievement which gave this learned man the title of "Restorer of Medicine" in England.

Léonicenus and Linacre, who were of the early Erudite Period, also merit mention not merely because of literary talents, but because they were the first eminent physicians to embrace the study of Greek classics and to propagate the knowledge therein contained. Subsequently others followed the same course —too many, in fact, to be enumerated; but it was easy to follow after such leaders. From the time when men began to realize the superiority of Greek models over prolix Arabian commentaries, they were anxious to seek the light at its source, and applied themselves with avidity to the study of the originals. At this time copies of Greek authors were few in number and in a deplorable condition, owing to neglect. To rediscover them, to purify, to eliminate what was not original, to rearrange, and finally to multiply by the aid of the printing-press, was an extended labor requiring great knowledge, rare sagacity, and commendable patience. One of the greatest publications in medical literature belonging to this epoch was a complete edition of the Hippocratic writings, translated into Latin by Anuce Foes—a poor but learned practitioner, who lived on the products of his business as pension physician in the city of Metz —and issued from Frankfort-on-the-Main in 1495. To this master-work Foes consecrated forty years of his life. Another treatise belonging to this same time, less important perhaps from a medical point of view, but nevertheless showing great erudition, was a treatise on the gymnastics of the ancients, by *Jerome Mercurialis*, a work said to be not less precious to historians than to antiquarians. It was by such intense zeal and hard labor that true erudition was restored in Europe.

Following now some of the special branches of medical learning and their development, let us look first at anatomy and physiology. I have already related the salient points of the life and labors of Mondino, of whom it is said that, about the year 1315, while professor at Bologna, he dissected the bodies of two women, and shortly after published an epitome of anatomy illustrated with woodcuts Also has been mentioned the prohibition of anatomical study pronounced by Pope Boniface VIII. in 1300. It was only towards the close of the fifteenth and the early years of the sixteenth century that this prejudice began to abate: the popes who then stood at the head of scientific movements withdrew their interdictions, and the universities of Italy gave public dissections. Achillini, Benedetti, and Jacques Berenger dissected at Bologna, Padua, and Pavia, previous to the year 1500; soon after, their example was generally followed.

Jacques Dubois, whose name was Latinized into Jacobus Sylvius, was born in 1478, in a village near Amiens; he studied in Paris, where he worked most industriously at anatomy, which later he was so successful in teaching. He was the first to arrange all the muscles of the human body, to determine their functions, and to give names to those of them which had not yet been so designated. He discovered the valves of the large veins, and was the first to study the blood-vessels by means of colored injections. He gave the same careful attention to pharmacy, and in Paris, before a large class of students, began lectures on anatomy, physiology, hygiene, pathology, and therapeutics; these he continued until the faculty, on account of jealousy, interrupted them. He then, in 1529, went to Montpellier, but returned two years

later to become a member of the faculty, and once more lectured with the greatest *éclat*. Later yet he became successor to Vidius in the Royal College—a position he retained up to his death, in 1555. His medical writings were extensive and marked by great accuracy, while for anatomy he did a great deal, contributing much to popularize it. He dissected a great number of animals and as many human cadavers as he could procure—the number, however, being small. Unfortunately he subordinated all his own research to the authority of Galen, being himself among those anatomists who permitted themselves to be so far misled.

The man of genius and courage, who accepted the truth of what his eyes revealed to him, and who was the true reformer in anatomy, was Andreas Vesalius, born at Brussels in 1514, of a family already illustrious in medicine. He studied at the University of Louvain, where he early revealed the inclinations of the anatomist, since in his leisure moments he was wont to amuse himself in dissecting small animals. Near Louvain was a place where criminals were executed; and Vesalius, having observed the body of one from which the soft parts had all been cleaned away by ravenous birds, only the bones and ligaments remaining, detached the extremities separately, and then carried off the trunk by night, thus possessing himself of his first skeleton. Attracted by the fame of Sylvius, he afterwards went to Paris to become his pupil, but, not content with the lessons of his master, continued to observe for himself. On the hill Montfauçon, where executions took place, he disputed with dogs and vultures for the remains of criminals, or by stealth disinterred bodies from the cemeteries at the greatest personal risk. So great was his application that his progress became rapid, and at the age of twenty he gave instruction to fellow-students; at twenty-two he became professor of anatomy at Padua, being appointed by the Senate of Venice; at twenty-nine he issued his great work on anatomy, which showed a completeness that left far in the rear all that had hitherto been published on this subject. The following year he was called by the Emperor Charles V. to the court of Madrid, then the most brilliant in Europe, where he became the first physician, and from this time abandoned his anatomical labors.

He was the first who dared to dispute the words of Galen and point out his errors—to ascertain that the greater part of Galen's descriptions, having been made from monkeys, did not correctly represent human anatomy. This audacity raised a crowd of vehement opponents, the least reasonable and most fanatic being his old master Sylvius; but even these onslaughts could not conceal the truth. The minds of men generally were ripe for the revolution whose signal fire was thus lighted, and no sooner did Vesalius appeal from the decision of Galen to observation of nature than a crowd of anatomists were ready to follow his method. He died in 1564.

One who, at Padua, had been first his pupil, then his co-laborer—namely, Columbus, born at Cremona in 1490—succeeded him. Columbus criticised in some respects the statements of his eminent predecessor, which he could better do since he is said to have dissected fourteen bodies every year, as well as to have practiced venesection. He came so near to discovering the mystery of the circulation that it is strange how he could have missed it. He even appreciated the systole and diastole of the heart and the connection thereof with dilatation and contraction of the arteries. He knew also that the pulmonary veins conducted arterial blood, and that the pericardium was a shut sac. He even appreciated the lesser circulation, since he described how the blood left the right side of the heart and passed into the lungs, and came back through the veins into the left ventricle; because of this discovery, and in spite of his utter failure to appreciate the greater circulation, he has been by some regarded as entitled to the credit which is universally given to Harvey. From his position as teacher in Padua, Columbus was called to Pisa, and from Pisa to Rome, where he died in 1559.

Another of the great anatomists of this period, second only in fame to Vesalius, was Eustachius, born about the beginning of the sixteenth century. He became physician to the Duke of Urbino, and in Rome a city physician and professor of anatomy, continuing to teach in the latter city until over-

taken by his final sickness. He was a defender of Galen rather than an opponent, and sought to shelter his reputation from the attacks of Vesalius. In his praise it must be said that for his day he was a great anatomist; his chief discoveries were in the domain of comparative anatomy. He brought to bear upon his work a knowledge of embryology which enabled him, for instance, to describe the kidneys and the teeth much more accurately than would otherwise have been possible; he noted also the pathological changes in bodies dissected, and is brought daily to our minds as we think of the connecting channel between the pharynx and the middle ear, to which his name has been given. He died in 1574.

Fallopius, born in Modena in 1523, was professor successively at Ferrara, Pisa, and Padua. He cultivated anatomy with the greatest ardor, and in consequence his name is also linked with that of Vesalius, as are those of Herophilus and Erasistratus in the history of ancient anatomy. His anatomical researches included all parts of the human body, and his name has been given to the tube through which the ovum enters the cavity of the uterus. Death overtook him in the year 1562.

Jerome Fabricius, better known as *Fabricius ab Aquapendente*, was born in the town of the latter name, near the southern end of the Apennines, in 1537, received his early education in Padua, and studied anatomy under Fallopius, whose assistant he also was. After the death of the latter he succeeded to the professorship of anatomy, and later built at his own expense a large anatomical theatre in which he lectured and demonstrated to students from all parts of the world. Toward the end of his life he had accumulated a large number of specimens, and published extensively on anatomy, embryology, physiology, and surgery. Though often accredited with discovering the valves of the veins, he is not entitled to that honor, since Erasistratus, Sylvius, Vesalius and others had previously described them, Estiennes had seen them in the azygos veins, and Canano in other veins. His true claim to glory rests upon embryological researches, which he was the first to undertake in a comparative way. In "*De Formato Fœtu*" he elucidated the development of the embryo and its membranes by a long list of observations on lower animals of many species. He was probably the first to describe the uterine decidua. Fabricius died in 1619.

This Fabricius must not be confused with the almost-as-renowned Fabricius Hildanus, who was born in Hilden, near Dusseldorf, in 1560. Under the German name of Wilhelm Fabry he became widely known as a surgeon, and, after traveling through France, settled in Hilden, but later moved to Cologne, where he founded an academy. His first treatise—on gangrene and sphacelus—quickly made him known, and went through eleven editions. From Cologne he went successively to Genf, Lausanne, Polen, returned to Cologne, and finally, after several other visits, settled in Bern, where he died of gout and asthma (in 1634). His frequent changes of location were perhaps less the result of instability than a testimony to his reputation, inasmuch as he was invited from one place to another. He has been with propriety named the "German Paré," since he rendered such great service to German surgery, and was not only an expert therein but likewise a cultivated physician and polished humanitarian; in fact he was ahead of his time, by many years, in these regards, as is shown by his recommending amputation in cases of gangrene, and his writings concerning gunshot wounds. He enjoyed a ripe experience also in obstetrics, and even instructed his wife in the obstetric art and praised her ability most highly. His most important contributions to literature were in the field of surgery, and these passed through numerous editions; while his opinions and practice are quoted even to-day.

During this epoch many modifications were introduced and improvements made in the teaching of medicine. Permanent amphitheatres were established for dissection, and chairs of anatomy created, their incumbents being paid out of the public treasury. The popes appear to have taken the initiative in this respect, which accounts for the great number of subjects with which Eustachius was supplied, as compared with Vesalius, who obtained only two or three in a year. Up to this time *the razor had been the sole instrument of dissection*, but was now replaced by the scalpel, which remains in use to-day.

By the labors of the few men mentioned, anatomy acquired a degree of perfection which it had never attained under the Greeks. Skillful artists put their labors upon paper, and plates and descriptions made from anatomical preparations represented the various parts of the human body with more fidelity than had been supposed possible. Nerves, tendons and ligaments were no longer confused, but traced so far as possible from origin to ramifications. Ancient errors generally were corrected. It was proven there were no bony structures in the tissue of the heart, that the partition between its cavities was not porous; and attentive examination of its valves led to the discovery of the lesser circulation by Columbus.—Michael Servetus, whom John Calvin burned at the stake, was perhaps the first to note this phenomenon. He saw that the blood could not penetrate directly from the right into the left cavity of the heart, but that it was necessary for the whole fluid to pass through the lungs where it became impregnated with the vital spirit of the atmosphere, and reached afterward the left auricle; the position of the valves in the pulmonary arteries and veins clearly confirmed his conjecture. Moreover, the size of the pulmonary arteries was enormous, and disproportionate to the quantity of blood necessary for the nutrition of the lungs, which seemed to prove that this was not, as had been believed, the sole purpose of those vessels. It was about this time that Fabricius ab Aquapendente pointed out valves in veins in various parts of the body, and that Columbus and Andreas Cesalpinus explained more fully the mechanism of the lesser circulation; in fact, the former so closely approached an appreciation of the purpose of the vascular system that some have thought he really knew it, but the passages in his writings thought to sustain this opinion are not at all conclusive. He seems to have confused the action of the heart during sleep with that during the waking hours; and although he realized the blood could not flow backward through the arteries, that the vena cava was the only vessel which permitted the entrance of blood into the heart, and though he spoke of anastomosis between arteries and veins and remarked that if a band be applied around a limb the veins swell below the ligature, he contented himself with comparing the motion of the blood with the flux and reflux of Euripus, as Aristotle had done. It is even thus that he tortured his mind in trying to reconcile two irreconcilable theories —*i.e.*, the opinion of the ancients on the motion of the blood, and recent discoveries in the anatomy of the vascular system.

(*To be continued.*)

THE ABUSE OF THE REPRINT.

It is a courteous and commendable custom for an author who has written an article of real value to send reprints thereof to libraries for reference, to his friends for preservation, and to those pursuing the same line of investigation, who might not otherwise become so soon acquainted with his researches. When, however, the reprint is used merely to advertise the fact that the writer is peculiarly skillful in a certain specialty, it is less commendable; and when it is used to advertise Messrs. Enterprise & Paywell's Panacea, or some similar substance, it becomes anything but commendable. These thoughts are suggested by the receipt of a pamphlet, reprinted from a journal published in a neighboring city, and bearing the title "Functional ——," by X. Y. Z., M.D., Professor of —— in the ——, etc.; which publication, although ostensibly coming to us from the author, is quite evidently circulated as an advertisement by, and at the expense of, the firm whose "trademark" product is therein recommended (no doubt honestly) as a sovereign remedy for the affection in question. Apart from all questions of propriety, men who permit their names thus to be misused are very shortsighted. Their advice, however unjustly, comes to be looked upon with suspicion, as not wholly scientific and disinterested; and their reputation becomes upon a par with that of the "advance agents" of theatrical notorieties—an honorable reputation when one does not pretend to be other than an advance agent. The advertising reprint and the reading notice are twin growths of the same poisonous root, and should be utterly condemned by thinking, self-respecting physicians.—*Medical News.*

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., FEBRUARY 25th, 1895.

Editorial.

ANGLE-WORM OIL.

The *Medical Standard* recently revamped this ancient remedy, which was once official in the British Pharmacopœia—even up to the middle of the last century—under the name of "*Aqua et Spiritus Lumbricorum Magistratus*," and which is said to be occasionally called for even now in the pharmacies of northwest and southwest Britain. The *Standard* copies the following directions for its preparation:

Take of Earth-worms well cleansed, three pounds; Snails with shells on their backs, cleansed, two Gallons; beat them in a Morter, and put them into a convenient Vessel, adding stinking Nettles, Boots and all, six handfuls, wild Angelica four handfuls, Brank-Ursine seven handfuls, Agrimony, Bettony, of each three handfuls, Rue one handful, common Wormwood two handfuls, Rosemary flower six ounces, Dock-roots ten ounces, Clove berries and root of sorrel five ounces, Turmerick, the inner part of Bar-berries, of each four ounces, Fenugreek seed two ounces, Cloves powdered three ounces, Harts horn, Ivory, in gross powder, of each four ounces, saffron three drams, small spirit of wine four Gallons and an half; after twenty-four hours infusion, distill them in an Alembick. Let the four first pounds be reserved for Spirit, the last for water.

This is very far, however, from being "*Angle-worm* Oil." The nineteenth-century individual who seeks the "ile" will not be satisfied with the comparatively pleasant preparation of an ancient British pharmacopœia—it is not loud enough; it does not suggest "smelling to heaven;" moreover, it is too expensive and does not appeal to the finny tribes which populate our waters.

When the lad with the hole in his hat, through which his hair waves as a plume; clad in hickory shirt, one "gallus," and trousers rolled to knees; with a sore toe in voluminous rags on one foot, and a stone-bruise on the heel of its companion; *sans* shoes, stockings, coat, and vest; duly armed with a "stick and a string"—asks for "angle-worm oil," he wants the simon-pure preparation—*solar-distilled*,—which there is but one mode of preparing:

Take a green glass bottle of the capacity of one quart—preferably a flat whiskey-flask of the cheapest kind, with the American eagle blown in its side—and fill with angle-worms freshly dug from the muck-heap; washing or cleansing ruins the combination. Now place the flask, duly corked with a corn cob wrapped in any old piece of cloth, on the top rail of a fence, where the solar rays will reach it from early dawn to sunset; and leave it there. In the course of a fortnight or three weeks the "beasts" will have disappeared, and in their place will be found a smaller volume (about one-fourth) of an oleaginous compound of most hideous and villainous odor—it is unnecessary to sample the effluvia more than once! This is the *only* pure and "*genuine* angle-worm oil," a sure lure for mullet, suckers, and bass, but best strengthened by the addition of tincture of asafœtida or oil of anise or of cumin.

Try it, ye piscatorially inclined sons of Æsculapius.—One experience will be sufficiently convincing! "The Complete Angler" will never again rouse your enthusiasm for bait-fishing, even if you are not inclined to classically anathematize the sport with a "Walton be—hanged!"

TREATMENT OF TAPEWORM.

In a recent communication to *The Lancet* (London), Doctor Leslie Ogilvie attributes the frequent failures to remove tæniæ to lack of attention to usual details in the administration of remedies. When the purgative follows soon after the anthelmintic, the worm is carried away all but the head; and in such cases it is useless to repeat the drug, as is frequently done, in a short time, since the

parasite now offers but scanty absorbing surface, and the chief effect is to poison the patient. Doctor Ogilvie does not consider castor oil a suitable purgative to give before the administration of the anthelmintic, as there is in all probability a considerable coating of mucus about the tænia which the oil does not remove; here Sulphate of Magnesia with tincture of Jalap is most efficacious.

He commands his patients to eat less than usual for a few days before treatment, and twenty-four hours before to restrict themselves to a milk diet with possibly a little stimulant. At bedtime a draught of Sulphate of Magnesia and tincture of Jalap is given, which is repeated at seven the next morning if the first dose is not operative. An hour later a drachm of fluid extract of Male Fern is administered, and in another hour a second dose. At eleven o'clock a dose of Castor Oil is administered—even if the worm has been passed previously it is well to give this to remove any poison which may be left. He visits his patients soon after the second dose of Male Fern has been given and inspects the stools, each one of which should have been preserved in a separate vessel. In searching for the head he finds it very desirable to employ a dilute solution of permanganate of potash as a disinfectant and to separate the tænia from the fæces.

A VALUABLE SURGICAL AID.

In these days, when perfect asepsis is deemed a *sine qua non* to all surgical work, any aid thereto, or anything that will simplify the labor entailed, is of general interest to the medical profession.

In reviewing a recent publication—"The Manual of Modern Surgery," by John Chalmers Da Costa—it was observed especial emphasis was placed upon the tenets and precautions of antiseptic surgery, and that the author gave unqualified praise to the ethereal antiseptic soap devised by Johnston, of the Jefferson Medical College Hospital, Philadelphia. His experience tallies so closely with our own, we venture to repeat his recommendation that "there is nothing equal to it" in preparing the hands and arms of the operator, or the integument of the patient to be operated upon for the knife; and that it is equally effective for cleansing or preparing sponges for any surgical procedure, especially for, or after, use in the abdomen, rectum, or vagina. Da Costa further adds, it is invaluable in the treatment of eczema—that *bete noir* of all practitioners,—and for cleansing deep cutaneous ulcers prior to the application of plasters and medicaments.

The fact the preparation is a fluid, is of inestimable advantage—it is always ready for use, equally effective with hot or cold water, and *the one* detergent that effectually destroys not only all germs with which it comes in contact, but those odors which linger about the hands after post-mortems and certain other examinations.—If this latter were its sole property, it would be sufficient to recommend it to general use by surgeons and physicians alike. But it also possesses another great advantage in permitting combination with bichloride in almost any proportion—something that is practically impossible with other detergents of this class; heretofore any form of mercurialized soap has been a failure.

Thus ethereal antiseptic soap commends itself for many medical and surgical purposes. As a parasiticide it is as effective as in the destruction of bacteria, and speedily removes pediculi; is a specific for scabies if properly applied, and of great assistance in the management of tinea, favus, and other skin diseases of this class. The editor of THE MEDICAL AGE can personally testify to its power as a remover of dandruff.

Still again: it is one of the few articles of the last decade of the nineteenth century that, bearing the name of its author, is not patented or trademarked.

NUCLEIN—A CORRECTION.

By one of those accidents that sometimes occur to the busy editor, an editorial upon Nuclein in the last issue of THE MEDICAL AGE contains a statement diametrically opposed to that which was intended. We were made to say an *alkaline* Nuclein should be regarded with suspicion, when it was intended to have said *acid* Nuclein—for the reason that by the addition of acid to this product the Nuclein is precipitated in the form of a thick whitish-yellow precipitate.

Nuclein, moreover, is insoluble in alcohol, although the spirit is essential to its manufacture—that is, it is employed in its purification; consequently a purported solution that is alcoholic can at best contain an infinitesimal and inappreciable amount of Nuclein.

In all preparations of this product it is also essential that the *percentage* of Nuclein be definitely stated, since a dishonest purveyor may justly claim as a solution of Nuclein a preparation containing so small a percentage of Nuclein as to be absolutely inert so far as therapeutic effect is concerned.

It is essential, too, that the source of Nuclein be mentioned, since it is well known that this product may be obtained from yeast, spleen, testes, thyroids, etc.—the first-named substance, however, yielding by far the best quality.

COD-LIVER OIL ALKALOIDS.

An Associated Press dispatch from Victoria, British Columbia, under date of February 19th, says:

William Good's family breakfasted on cod-fish from which the liver had not been removed. Three of the sufferers were brought very close to death, but all are now on the road to recovery. This is the first case of cod liver oil poisoning on record here.

If the alkaloids arising from putrefaction in cod-liver can cause the serious illness of a family, what must be the value of these same alkaloids and ptomaines when placed in solution and advertised as a succedaneum for true cod-liver oil?

This is not the first case, however, of poisoning of this character, since serious results have accrued on various occasions through the ingestion of cod-liver oil—expressed, as perhaps a majority of the cod-liver oils in market are, from putrid and semi-putrid livers.

Cod-liver oil as a medicament depends upon the fact that it is the most easily digestible form of fat, and it may readily be seen from the foregoing that it is most essential in selecting such a product that it be prepared from absolutely fresh livers.

EDITORIAL NOTES.

Fatal Poisoning by Quassia.—

Doctor Venn, of Chicago, reports to Professor H. C. Wood a case of fatality in a child as the result of the administration, per rectum, for the relief of "pin worms," of an infusion of Quassia, two ounces to the pint. This is the first case of the kind on record, though, as Doctor Wood remarks, the experiments of Hoppe show that the active principle of Quassia "is a poison to frogs, especially affecting the nerve-trunks and the muscles; fifteen milligrammes of this principle causes in man violent frontal headache, vertigo, excessive nervous restlessness with pronounced evidence of toxic gastro-enteritis, such as burning pains, vomiting, and diarrhœa."

In Doctor Venn's case nearly a pint of the infusion was employed, and ten minutes later the child became livid, its lips cyanosed, and the skin of a waxy hue; when seen, respiration was shallow and labored, muscles entirely relaxed, and pulse imperceptible. It was first thought the intestine had been perforated by the syringe-nozzle, but such was not the case.

Artificial Fecundation.—

John Hunter was the first to perform this operation. Consulted by a person who desired family, but whose urethra opened into the perineum, he recommended the use of a syringe, previously warmed, to inject, *post coitum*, the semen into the vagina, during the orgasm. Long before, however, Averroes reported a woman "that conceived in a bath, by attracting the sperm of a man admitted to bathe near her"—which may be taken for what it is worth, though it was admitted by Mohammedan expounders of jurisprudence as a precedent. J. Marion Sims performed the operation fifty-seven times, taking up the semen from the vagina immediately after coitus and injecting it into the uterus; and though some success attended his efforts, none of those thus rendered *enceinte* ever proceeded to full term, hence the ultimate aim was not accomplished; moreover the successes were not of a character to encourage further experimentation.

Hypodermatic Catharsis.—

Recently, in *The Medical News*, Doctor Fincke gave the results of personal experience and experiments with Magnesium Sulphate employed hypodermatically as a purgative. Twenty-five cases were selected and fifty injections of from one to six grains made.

In order to compare the hypodermatic method fairly with ingestion by the stomach, eleven cases were selected that had proved refractory to subcutaneous medication. As a result, eighty-two per cent. of the cases treated hypodermatically proved utter failures, while only twenty-seven per cent. of failures occurred when the drug was given by the mouth.

This tallies with the experiments made by the editor of this journal and others, and heretofore reported in THE MEDICAL AGE. It is evident that the claimed purgative property of Magnesium Sulphate when exhibited subcutaneously is mythical.

Precautions in the Use of Pessaries.—

Neugerbaner has collected 282 cases in which pessaries have been the cause of more or less grave lesions of the genital organs. It is therefore insisted that when a pessary is used great care be taken as to its form, size, the substance from which it is made, and that the patient be subsequently under control of the physician. Neugerbaner prefers globular or ovoid pessaries, and lays stress on the point that the patient should herself exactly understand how to withdraw the pessary at night and insert it in the morning, and, in case it is employed for retro-displacements, to withdraw it as soon as it causes the lightest pain—not being compelled by ignorance to await the aid of a physician.

Physiology and the Fair Sex.—

The effect of physiological knowledge on a woman's mind is not always to be calculated. The *Lancet* (London) is authority for the following letter, received by one of the examiners of the College of Physicians, from a female aspirant for a medical diploma, who had been plucked but permitted a second go:"

SIR:—Don't you dare refuse me again in physiology, when you *know* I know *all about* physiology. I very likely know more than you do. I shall write to Mr.——, if you do, about it. Very soon doctors will be drawn only from we *pure, noble-minded women*, and you *vile, drunken, filthy* men expelled forever.

"Travailleurs de la Mort."—

This is the title of a semi-medico-legal work by Doctor P. Meguin, recently published in Paris, and descriptive of the various kinds of life which act as scavengers of dead bodies. It aims to show that these scavengers make their appearance at definite points of time, so that a knowledge of the order and class, and of their coming, will enable an investigator to determine the length of time that has elapsed since death, provided it does not exceed three years.

Strychnia in Uterine Hæmorrhage.—

Recently very extensive claims have been made for Strychnine as a specific against all forms of uterine hæmorrhage. In gestation where there has been a previous history of flooding, it is advised to administer in one-sixtieth-grain doses three times daily for a period of from four to six weeks before expected labor. It is also declared to be of value where previous parturitions have been tardy owing to irregular and feeble uterine contractions.

The "Liver Pad" Redivivus.—

Strange to say, the "liver pad" craze which ran riot some years ago, and in fact wore itself out, has taken a new lease, and already the old advertisement of "cure-all" effects are to be seen in the magazines.

Citric Acid in Pertussis.—

Moncorvo declares Citric Acid exercises a decided action upon whooping-cough and may be used with success as a prophylactic either in the form of strong lemonade or as the juice of lemons.

Protective Inoculation in India.—

The protective-inoculation methods for the prevention of cholera adopted in India, according to the *Medical Press and Circular*, "have not proved a signal success."

Items and News.

"Pithecanthropus."—

At a recent meeting of the Paris Society of Anthropology, M. Manouvrier gave an account of the discovery by M. Eugene Dubois, surgeon in the Dutch Army at Batavia, of a cranium and femur with characters partly pithecoid, partly anthropoid. The remains were found in the lower quaternary strata in Sumatra, and M. Dubois has published a very complete monograph upon them. The cranium of the "pithecanthropus" is described as being intermediate in character between the anthropoid apes and the aboriginal Australian. It exhibits an exaggeration of the Neanderthal skull, with its enormous superciliary eminences. The cranial capacity is much greater than that of the largest gorilla, but it is less than in primitive man and does not exceed that of advanced imbecility. A molar tooth that was found near the skull more resembles in its great size that of a monkey than of a man. The position of the occipital foramen shows that this was seated upon the vertebral column more directly than in any anthropoid ape. It most approximates to the gibbon, but the differences between the human skull and that of the gibbon are greater than between this specimen and that of man. The femur, which was the only other part of the skeleton found (although, as the site of this bone was at some distance from the cranium, it may not belong to the same individual), shows that the pithecanthropus could walk erect. The femur, indeed, approximated more to the human type than the cranium. In the course of the discussion M. Duval remarked that the communication was perhaps the most important that had ever been made to the society, and thought the Netherlands Government should be asked to have casts made for presentation to the museum. He considered that the more markedly human type of the femur than of the cranium suggested that the pithecanthropus had learned to walk in human fashion before it had developed human intelligence. —*The Lancet* (London).

"American Orthographical Errors."—

Our Australian *confrères* are apparently just as decidedly opposed to certain American methods of spelling English words as we are in this part of the world. Here is an extract from a review on an American medical work, published in "Filadelphia":

"Everywhere are noticeable American orthographical errors quite inexcusable: *e.g.*, 'fibers' for 'fibres,' 'edematous' for 'œdematous,' 'gynecological' for 'gynæcological,' etc."

The above appeared in a recent issue of an Australian contemporary, and probably reflects the feeling of the colony on the subject. The "clipping" and "chopping" policy which has resulted in this new fangled method of spelling is, however, more a matter to excite amusement than to call for serious criticism. When, for example, the "physical" and "chemical" properties of a substance become converted into the "*physic*" and "*chemic*," it is difficult to know how to restrain a display of hilarity within the bounds of propriety.—*Medical Press and Circular.*

The "Danse du Ventre" in Therapy.—

Physicians who visited "Midway" hardly dreamed that the stomach dance would play a part in therapy. The *Lyon Médical* recently gave an account of a young actress who suffered from obstipation, supposed to be due to uterine displacement. The girl secured an engagement to perform the "*danse du ventre*" in the rural districts, and from the time of the first representation found her bowels perfectly free; subsequent performance of this dance four times daily is said to have kept them in good order. A New York journal, in commenting thereupon, naturally asks whether the girl performed this dance in public without previous practice, or whether mere rehearsal lacked the therapeutic action of a public performance?—*Medical Standard.*

The Corset in France.—

A petition has been presented to the French Chamber of Deputies against wearing the corset as injurious to the health of the female part of the population. The Chamber solemnly received the petition, and passed it in committee. Meantime a Paris journalist has been gathering the opinions of notable women. A great many of them denounce the corset, declaring it to be unhealthy and ungraceful; they say it turns the figures into one commonplace mould, spoiling pretty ones and doing nothing to improve the ugly ones; yet most of the fair ones interviewed who expressed themselves in this fashion wore the objectionable garment.—*Medical Record.*

Patent and Proprietary Medicines.—

The *Therapeutic Gazette* justly declares the majority of these have no real merit. "Most of them represent absolutely nothing that was not previously known to science; they are nuisances; they do not contribute to gen

eral intellectual progress; they discourage scientific investigation. . . . The only explanation that can be given of this lamentable state of affairs lies in the laxity and ambiguity of the present patent laws, and the almost puerile knowledge which they manifest regarding the history of chemistry in its broadest sense. A medicinal preparation need not represent anything further than a new name."

A Novelty in Poisoning.—

The Medico-Legal Society of Paris has received a communication respecting the death of a child five months old. No symptoms of disease were found, but, upon post mortem examination, it was discovered that the stomach and intestinal canal contained numerous pieces of sponge. It was concluded that the child's mother had utilized for its destruction the method sometimes used with dogs, of giving them pieces of sponge soaked in fat and pressed tight, so that, as the fat was removed by digestion, the sponge might expand and block the intestinal canal.—*Medical Press.*

A Forgotten Honor Recalled.—

The trephine was first used in the United States in the middle of the seventeenth century, by Doctor John Clarke, the first physician of Boston, a graduate, "*cum laude*," of the Royal College of Physicians. From him directly descended seven doctors, S. John Clarke, the last, dying childless in 1807. Samuel Clarke, brother of the second Doctor John Clarke, also had medical descendants, one of whom, the late Doctor E. H. Clarke, was a leading clinician of New England.—*Medical Standard.*

French Women and Medical Study.—

According to *Le Progrès Médical*, the medical profession does not have much attraction for French women. Of 165 female students registered in the Paris Medical Faculty at the beginning of the present academic year, only sixteen were French. On the other hand, of a total of 164 female students in the Faculty of Letters, 141 were French. There were seven French female students in the Faculty of Science, and three in that of the Law.—*Medical Times.*

Antitoxin.—

Doctors should be careful about buying preparations labeled "Antitoxin." The temptation to manufacturing chemists is of course great, to offer this promising remedy for sale, but inasmuch as the process of manufacture requires several months, there is as yet no reliable antitoxin of American make. Thus far only the German or French preparation can be considered genuine or effective.—*Atlanta Medical and Surgical Journal.*

Porous Glass for Windows.—

The latest hygienic craze in Paris is the use of porous glass for windows. It is declared to possess all the advantages of the ordinary window-framing, and, while light is as freely admitted as through the medium of common glass, the "porous" further admits air too, the minute holes being too fine to permit of any draught, while they provide a healthy continuous ventilation through the apartment.—*The Hospital.*

Scholarships and London Medical Schools.—

At the recent examinations for honors at the University of London the scholarships and gold medals were pretty evenly won by students of the principal London hospital schools. Guy's and St. Thomas's were first in "Medicine," St. Bartholomew's and St. Thomas's first in "Obstetric Medicine," and St. Mary's and University College first in "Forensic Medicine."—*Medical Press and Circular.*

Suggestive!—

He came into my office wearing an expression equally venereal and lugubrious. He was one of "the boys." "Aha!" exclaimed I, "dropped your nickel in the wrong slot?" "'Twasn't a nickel," he said. with a sigh, and I proceeded immediately to fix up his dope.—Doctor Cooper, in *Medical Gleaner.*

A Wise Reform!—

The Italian Government has decided to abolish twenty-three universities by converting them into preparatory schools. In place of these it will create in four or five of the larger cities thoroughly modern and well appointed State universities.—*Lancet-Clinic.*

Science vs. Fact.—

Scientists say that at about 3 o'clock A.M. the human body is at its lowest ebb of strength; yet who has not heard of the baby that is able to raise the whole house at that hour?—*New York Medical Times.*

!!!!!!!

Robert Koch, of tuberculin and bacteriological fame, has sought the medical advice (?), and placed himself under the care of, Father Kneipp, the clerical water-cure practitioner.

Book Reviews.

THE YOUTH'S COMPANION. Volume LXVIII. Cloth; imperial 4to; pp. 800 Perry Mason & Co., Boston.

This volume is made up of the weekly issues of 1894, and is a treasure-house of practical information and general literature. Nothing in which the world is in general interested, whether in literature, science, art, medicine, or politics, has been neglected. The *Youth's Companion* is noted for its honest, straightforward, terse editorials, dealing in a practical manner with topics of the time, without reference to political bias. Despite the fact that this journal continues to masquerade under a title suggestive of juvenility, it is really a sound, earnest family paper, one which is no less eagerly sought by the parents than by the children. The editor of the ablest medical journal in Canada, whose life is largely given to researches in chemical science, stated to us in conversation that among all the exchanges that come to his table the *Youth's Companion* is the first to receive attention.

The impression each succeeding volume gives is that this publication has reached the acme of literary success; yet every new issue shows a steady improvement. Its articles furnish an amount of valuable and entertaining reading such as can nowhere else be found.

The prospectus for 1895 announces an unusual array of attractions—fourteen serials, a wealth of short stories, humorous sketches, adventures, scientific and home articles, aside from timely editorials on all important questions, and more than two hundred original poems of the highest class. Where in the entire world can another journal so entertaining, so instructive, and at the same time so safe, for readers of all ages, be found?

THE GLOBE QUARTERLY REVIEW. Price, 50 cents; $2.00 per year. The Globe Publishing Company, New York City.

The contents of the *January* number are: "A Philadelphia Philosopher," "The New Rubicon," "The Lathrops and the Convents," "Mother of God," "Life of Bismarck," "Bishop Spalding on the Rack," "A Chicago Coward," "Lay Genius in the Catholic Church," and Globe Notes, all by the editor, W. H. Thorne. Other articles are: "Four Gleams of Reformation," by Doctor T. E. H. Williams; "Characteristics of Tennyson," by Eugene Parson; "Limits," by Louis J. Block; Christmas—a pastoral,—by Reverend John McCann; "A Woman's View of Dante," by Bell T. Drury; "Pilgrims and Pilgrimages," by W. J. D. Croke; "Is Home Life Woman's Limit?" by Elizabeth A. Adams; "Aubrey de Vere," by B. I. Durward.

The *February* issue contains: "Sappho," by S. Millington Miller, M D; "Private Picture Galleries of the United States," by W. A. Cooper; "Nihilism Up to Date," by V. Gribayedoff; "Bentley's Beat," by Lida Rose McCabe; "In De Vorseau," by Francis M. Livingston; "Vassar College," by Elizabeth E. Boyd; "The War of the Roses," by Lily S. Hicok.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Lt'd), Toronto.

The February issue contains: "Some Unpublished Letters of the Earl of Lytton," by George Stewart; "A Neglected Chapter in the War of 1812," by A. F. Hunter; "The Brother's Story," by Professor J. C. Gwillim; "Manitoba Revista," by Barlow Cumberland; "False Insurance Methods," by John Ferguson; "Canadian Short Story Writers," by Allan Douglas Brodie; "Strictly Vegetarian; or, Brown's Dinner in Jail," by Keppell Strange; "Modern Royal Authors," by Eugene Davis; "The Poor Player"—from the French of Gaston Schaeder,—by S. A. Curzon; "The New Tzar's Reign," by Felix Volkhovzky; "A Tragedy at Millageville," by Elgin Myers; "The Royal Military College," the usual "Gable Ends" and "Book Notices." The poetry is by Reginald Gourlay, John Imrie, F. P. Betts, Mrs. S. Frances Harrison, and James Hamilton.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

Almost every prominent question of current public interest is treated by able writers in the February number. Honorable Charles S. Hamlin writes upon "The Prospects of the Democratic Party;" the industrial problem is touched upon by Mary B. O'Sullivan in an article on "Life in a Factory Town;" Honorable Charles J. Bonaparte contributes "Religion the Safeguard of American Liberty;" "If Bendaoeed Returns" is by Reverend William H. O'Connell; the money question is set forth by Michael Corcoran; C. E. Franklin contributes an interesting article on "The Irish Race in American Politics."

THE MAGAZINE OF TRAVEL. Price, 25 cents; $2.50 per year. E. H. Talbott, New York.

The contents of the February number are: "Charleston: A Typical City of the South,"

by George Marshall Allen; "An Experience in Bethlehem," by Albert Payson Terhune; "Japan as Through a Monocle," by Ellis Wooster; "The Ocklawaha River," by John Alleyne Macnab; "The Isle of Wight," by Laura B. Starr; "At Craigellachie's," by George Willer; "A Thousand Miles Afoot in the Tyrol and Switzerland," by Henry Pelouze de Forest, M.D.; "At the End of the Route," a story, by Kate Jordan; "A Thrilling Experience," by Eli Perkins. The poetry is by Arthur Grissom, Frank Chaffee, and Clinton Scollard.

Sun and Shade. Price, 40 cents; $4.00 per year. Sun and Shade Publishing Co., New York.

The eight pictures presented in the January number are reproductions in chromo-gelatin and photogravure of a portion of the gallery of paintings belonging to Mr. Louis R. Ehrich. First is "The Holy Family," from Van der Weyden. Others are: "Portrait," from Rembrandt; "The Water Fall," from Jan Wynants; "Landscape with Cattle," from Paul Potter; "The Love Letter," from Netscher; "The Village Dance," from Rubens; "Landscape with Fishermen," from Van Goyen; "Milking Time," from Adrian Van de Velde.

Godey's Magazine. Price, 10 cents; $1.00 a year. The Godey Company, New York City.

Notable among the contents of the January number are: "Private Picture Galleries of the United States"—the Munger collection,—by W. A. Cooper; "Cadet Life at West Point," by Bernard F. McManus; "The Marriage Ceremony in Rural Russia," by V. Gribayedoff; "At the Sign of the Cloche d'Argent," by Violet Etynge Mitchell; "One Summer's Saunterings," by Wilhelmina W. C. Scotti.

Review of Reviews. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The special features of the February number are sketches of Robert Louis Stevenson and Rubenstein, "A Study of Civil Government in Manitoba," and "The Cotton States' International Exposition." In the regular departments there are: "A Review of the Progress of the World;" "Record of Current Events;" "Current History in Caricature;" "The Leading Articles of the Month."

Life and Letters of Hahnemann. By Thomas L. Bradford. Cloth; 8vo; pp. 513. Price, $2.50.

This is a very complete history of the great apostle of homœopathy, and is of interest not only to homœopaths but to all medical men, in that it deals with a portion of medical history which is too little understood. Whatever may be the opinion regarding homœopathy, the fact remains that Hahnemann was a man of great ability and had already earned a reputation before he founded his new system of medicine. Of particular interest to the general practitioner are the chapters devoted to Hahnemann's posology. We are very much pleased to have the opportunity to peruse this work—not because of any leaning toward *similia*, but because of the historical facts therein embodied.

Relations of the Eye to General Diseases. By Max Knies, M.D. Cloth; 8vo; pp. 470. Price, $4.75. Wm. Wood & Company, New York.

This is an English translation of Professor Knies's work, edited by Henry D. Noyes, A.M., M.D. It tells in a clear and concise manner how diseases of the eye often possess important significance in relation to the diagnosis and correct understanding of diseases of other organs. Throughout the book the alliances between the eye and the rest of the body are so admirably traced that it will be hard to decide upon whom the larger debt of obligation to the painstaking author will rest—whether upon the general physician or upon the ophthalmologist. Indeed, the book is really a cross-index between the general field of medicine and ophthalmology.

The Birds of Ontario. By Thomas McIlwraith. Cloth; 8vo; pp. 426. Price, $2.00. William Briggs, Toronto.

This elegant volume should be in the hands of all who are interested in the natural history of North America or are lovers of birds, for it is by all odds the most able compilation extant of the ornithology of Canada. Its value is materially enhanced by the number of engravings which adorn it, and which are examples of the best efforts of the printer's art.

The introductory chapter, which deals with bird life, collecting and preserving of specimens, etc., is alone worth the price of the volume.

Proceedings of the Fourth Annual Meeting of the Association of Military Surgeons. Edited by Doctor E. Chancellor, Secretary. Cloth; 8vo; pp. 816. Price, $4.00.

This voluminous work comes to us the perfection of elegance in make-up and typographical appearance. It embodies a large number of articles of inestimable value to every one interested in military medicine, surgery, sanitation, and equipment. More-

over, it is beautifully illustrated with engravings, half-tones and electrotypes, and is made more valuable by a comprehensive index.

SEXUAL NEURASTHENIA. By George W. Beard, A.M., M.D., and A. D. Rockwell, A.M., M.D. Cloth, 12mo; pp. 294. Price, $2.75. E. B. Treat, New York.

A work which supplies information not often sufficiently elaborated in medical literature. It deals with the treatment of a malady that is all too frequent and but little understood, and lays more stress upon the constitutional than upon the local element in therapeutics. It should be in the library of every general practitioner who attempts to treat these cases.

THE TWO-LEGGED WOLF. By N. M. Karazin. Paper; 12mo; pp. 322. Price, 50 cents. Rand, McNally & Co., Chicago.

This is a wild romance, translated from the Russian by Boris Lanin. He deals with camp and desert life, the scenes being laid in Central Asia at the time of the Russian advance toward Khiva. The plot is interesting, and the story dramatically told, with a love episode running through the volume which commands attention from first to last. There are also many vivid pictures of Russian military life.

MICHIGAN BOARD OF AGRICULTURE, 1893. Cloth; 8vo; pp. 526.

This is the thirty-second annual report of the Secretary of the State Board, and is more than usually interesting. There is embodied the ornithology of Michigan, which has been previously published in monograph form; also miscellaneous papers on "Forestry," "Planting of Trees," "Wealth of the Commercial Woods," etc., etc., and the usual annual reports upon crops, etc.

ESSENTIALS OF CHEMISTRY AND TOXICOLOGY. By R. A Witthaus, A.M., M.D. Muslin, red edge; 32mo; pp. 314. Price, $1.00. William Wood & Co., New York.

The fact that this little book has reached its twelfth edition shows that it has met with great favor at the hands of medical students and professors. It presents a very large amount of valuable information upon the subject of *medical chemistry* condensed into its small compass, and is quite up to date.

TEXT-BOOK OF HYGIENE. By George H. Rohe, M.D. Cloth; 8vo; pp. 553. Price, $3.00. The F. A. Davis Co., Philadelphia.

This is the third, thoroughly revised and largely rewritten edition of the most popular text-book upon this subject extant. We have before reviewed earlier issues of this work in these columns, according it the place which it so fully merits. We cordially recommend it to the medical profession.

THERAPEUTIC TERMS. By H. M. Whelpley. Cloth; 32mo. Price, 75 cents. Meyer Brothers Drug Co., St. Louis, Mo.

This is a reference book suitable to either doctor or pharmacist; it supplies in practical form an easy and ready means of reference for information that they by the very nature of their business or professional lives cannot take time to seek for in more ponderous tomes.

THE POCKET ANATOMIST. By C. Henri Leonard, M.D. Leather; 32mo; pp. 300. Price, $1.00. The Illustrated Medical Journal Co., Detroit.

This is the eighteenth edition of this popular brochure, especially intended for the pocket. The illustrations are derived from the English edition of Gray's Anatomy; indeed, the volume is a condensed illustrated Gray.

THE OLDEST HOMŒOPATHIC PHARMACY.

We are in receipt of an elegant little pamphlet with this title, with the compliments of Boericke & Tafel. It is a description of their establishment in Philadelphia, with pictures of different departments. It is very elegantly gotten up, and most creditable to the enterprise of the firm.

DOSE BOOK AND MANUAL OF PRESCRIPTION WRITING By E. L. Thornton, M.D. Cloth; 16mo; pp. 334. Price, $1.25. W. B. Saunders, Philadelphia.

This is a compilation of material not otherwise accessible except by laborious search through many volumes.

ESSENTIALS OF DISEASES OF THE SKIN. By Henry Stelwagon, M.D., Ph.D. Cloth; 16mo; pp. 270. Price, $1.00.

This is the third edition, revised and enlarged, of Number XI of Saunders' Question Compends, and deals not only with diseases of the skin but with syphilodermata.

ESSENTIALS OF DISEASES OF THE EAR. By E. B. Gleason, M.D. Cloth; 16mo; pp. 147. Price, $1.00 W. B. Saunders, Philadelphia.

This volume is designed to supplement the necessarily brief course of lectures that undergraduates receive in otology, and to serve as a manual of reference during the period of practice work in the dispensary.

Therapeutic Brevities.

Gonorrhœa.—If gonorrhœa is in the acute stage, M Routier advises simple antiphlogistic treatment, but as soon as the malady has become subacute he commences by washing out by a continual stream not only the anterior but also the posterior portion of the urethra. To practice these injections a reservoir placed at a height of five feet above the penis of the patient, with a capacity of two quarts, is employed, filled with solution of Permanganate of Potash, 1 to 2000. An india-rubber tube two yards in length, with a small glass cannula at the end, is attached to the reservoir. The patient first urinates in order to expel any mucus accumulated in the canal; then inserts the cannula into the urethra, when the liquid penetrates up to the neck of the bladder and then flows back, thus washing out the anterior portion of the canal. This done, the patient is made to close the meatus tightly about the cannula, when the liquid, failing of other exit, soon penetrates to the bladder. The current is totally arrested when is felt a desire to urinate. The operation can be recommended once or twice at each séance, and renewed the following days. At the end of a week a cure is generally effected. In order to make sure that the patient is really cured, it is recommended he drink a quart of beer, that beverage being infallible to reproduce the "running" when the disease is not wholly arrested.—*Medical Press and Circular.*

Viburnum Prunifolium.—Like the cinchona tree, the bark is the part which yields the medicinal virtues. It has a specific action on the female reproductive organs, and is anti-menorrhagic and anti-metrorrhagic. Infusions and decoctions may be used, but in these days of refined chemistry the fluid extract requires no further recommendation than its simple mention; compressed pills and tablets of the solid extract have also attracted my notice. Liquor Sedans, containing not only the Black Haw, but golden-seal and Jamaica dogwood combined with aromatics, is an excellent preparation, to which in certain cases ergot may be profitably added.

I prescribe Black Haw to prevent abortion; to control menorrhagia and metrorrhagia from uterine fibroid or endometrial fungosities; as a sedative in ovarian congestion and its ordinary consequences, etc., and, too, in almost all kinds of pelvic irritation, congestion, and inflammation. May I just here inject the remark that had Hodge, a quarter of a century ago, known the value of this remedy, he would have been gratified by its influence in the treatment of what he termed "irritable uterus."—Doctor H. R. Holmes, in *Journal of the American Medical Association.*

A Case of Poisoning with Nutmegs.—Mr. T. G. Simpson, in *The Lancet* (London), relates that in December his assistant was called to see a strong, healthy woman, twenty-six years old, who was found lying on the bed in a drowsy condition and very delirious. There were fairly lucid intervals, when she complained of a sensation of great tightness across the chest and of vertigo and faintness when attempting to rise; she also vomited several times. Her pulse was seventy-five, rather feeble; heart's action feeble; pupils normal. It was ascertained she had taken two nutmegs crushed, in a small quantity of gin, as an emmenagogue. She was ordered to remain in bed, and to take strong coffee with a dessertspoonful of brandy every half-hour; also was prescribed a mixture of potassium bromide, ammonium carbonate, sodium bicarbonate, spirit of cajeput, and chloroform-water. Mr. Simpson saw the patient a few hours later and found her condition improved, but still showing the same symptoms. He continued the treatment, and the next day she was very much better, although weak and with a little vertigo; the following day she was able to get up.

Arseniate of Soda in Leukæmia.—No one denies the efficacy of arsenic in leukæmia and lymphadenia. A one per-cent. solution of the Arseniate of Soda hypodermatically is an efficient substitute—Fowler's solution is too irritating for subdermic use. Injected with aseptic precautions the procedure is painless, while it leaves no nodules. To obtain good results one should not fear to employ large-sized doses. Begin by injecting five drops of the one-per-cent. solution, and rapidly carry the dose up to fifty or sixty drops per injection. Continue these until signs of intolerance appear—dryness of the throat, sensation of constriction of the pharynx, injection of the ocular conjunctiva, slight œdema of the eyelids, rhinitis, cutaneous eruptions, formication, headache, and a tendency to diarrhœa. As many as fifty injections have been given to the same patient. Under their influence the spleen and enlarged glands diminish considerably in volume, the relations of the red and white blood corpuscles approach the normal, and the general condition is greatly improved.—Professor Rummo, in *La Semaine Médicale.*

Ulceration of the Cornea.—If the corneal epithelial surface be abraded, any eye-water that is not truly aseptic may cause obstinate inflammatory processes. As there are no precise indications for the use of collyria in corneal ulceration, and they are very prone to be septic, agents of this class are best ignored altogether. In simple corneal ulcerations, rigid disinfection of the eyelids, principally of the palpebral borders and eyelashes, is advised, along with curetting of the ulcers followed by irrigation to remove infected portions. Likewise inject under the conjunctiva in the neighborhood of the infiltrated part a few drops of a 1:2000 solution of Corrosive Sublimate, and rigorously apply a comprehensive bandage, but without collyrium.

In operations for cataract where the lens is extracted entire, collyria are not necessary, and the same holds true of non-complicated traumatic cataracts.—De Wecker, in *Le Bulletin Médical.*

Ingrowing of Nail.—Ingrowing nail, or *ongle incarné*, as the French call it, is, as is well known, a very painful affection, and, unfortunately, the operation necessary for its cure is often dreaded by the patients, although local and general anæsthetics are employed to render the avulsion as painless as possible. A very simple method has been frequently employed by a *confrère* with constant success. It consists in painting the offending portion of the nail with a warmed forty-per-cent. solution of Caustic Potash. In a few seconds the upper horny layer is rendered so soft that it can be easily removed by a piece of broken glass used as a scraper. The application of the solution and the scraping is continued until nothing but an exceedingly thin portion of the nail remains, which can be easily removed by a small scissors. The patient can now be considered cured, without having lost a drop of blood nor felt any pain.—*Paris Correspondence Medical Press and Circular.*

Belladonna in Skin Diseases.—Eliza Dunbar, M.D., (*Woman's Medical Journal*) speaks in high terms of the benefit she has derived from the internal administration of Belladonna in all itching skin diseases. She has employed it in pruritus and eczema. Daily doses of one drachm are usually enough. It may be combined with tr. ferri, and in this form is very helpful in pruritus pudendi. In some old and obstinate cases, not only was the itching relieved, but the cases did well and improved under the administration of the drug. Persons vary in their susceptibility to the drug, and this must be kept in mind. When the patient flushes and gets headache from small doses, he will derive no benefit. The author noted that in case of failure she had good results when the drug was obtained from another chemist, showing the need for care in selecting the remedy. When the case is not promptly benefited it is, as a rule, useless to persist in the treatment.

Pneumonia in the Aged.—Pneumonia in aged persons, according to Lemoine, should be treated by giving abundant liquid nourishment in broken doses, or quantities soup, milk, eggs, peptone, meat-juice, etc. He advises dry cups, the employment of tonics, alcohol, glycerophosphates, etc.

(1) ℞ Brandy, 40 grammes.
Tr. kola, 10 grammes.
Syr. acacia, 50 grammes.

In teaspoonful doses during twenty-four hours.

(2) ℞ Glycerophosphate of soda, 6 grammes.
Tr. nux vom., 30 drops.
Wine, 100 grammes.

Four teaspoonfuls a day.

The necessity for strengthening the heart is met by caffeine and digitalis. Insomnia is treated by sulphonal or codeine. Chloral should be avoided. Diuresis should be encouraged.—*Revue de Therapeutique.*

Croup.—The medical treatment of croup that will give the best chance of recovery is: A warm room, the air of which is saturated with moisture; an emetic of Turpeth mineral, to be repeated whenever the respiration becomes embarrassed; if the bowels are constipated, a sufficient amount of calomel to move them thoroughly; ice to the throat, either in a rubber bag or bladder; if thirst exists, pellets of ice internally; quinine to decided cinchonism, which is to be maintained; a sufficient amount of chloral hydrate to allay spasms of the air-passages, with decided doses of belladonna; the inhalation of steam, medicated or not as may suit the peculiar belief of the individual practitioner; the juice of the pineapple (Bromelin), with carbonate of soda in warm water, to be supplemented by the administration of a suitable amount of easily digested food.—*Medical Brief.*

Cactus Grandiflorus in Cardiac Pain.—A case lectured on by Professor S. Solis Cohen exhibited the good effects of the persistent use of fluid extract of *Cactus grandiflorus* in relieving cardiac pain. The lesion was mitral

obstruction with leakage, in a woman thirty years of age. The lecturer stated that his own experience with this drug had been unsatisfactory, and he had not used it for more than a year past. In the present instance, however, it had been prescribed by his chief of clinic, Doctor Riesman, in whose hands the result had certainly been good. He was therefore encouraged to renew his own resort to Cactus, and to give it for longer periods before again abandoning it. The dose, in the case demonstrated, was twenty drops three times a day.—*Polyclinic.*

Ergot in Periodic Neuralgia. — Doctor Thomson reports in the *Medical Record* four cases of very severe periodic neuralgia in which administration of Ergot gave most pleasing results. He administers the fluid extract combined with an equal quantity of the elixir of cinchona, the latter ingredient being added to prevent nausea. Two teaspoonfuls of this mixture are to be taken in water as soon as the premonitory symptoms are noticed, and the patient is directed to keep very quiet. If no relief follows, in an hour another dose may be given, and in another still another dose. Should the patient vomit, the drug may be given per rectum in two ounces of water. Careful attention to the condition of the alimentary canal is necessary between the attacks.—*Therapeutic Gazette.*

In Endometritis.—The local treatment is often hampered by the presence in the cervical canal of a plug of tenacious mucus or muco pus, the more so as it is difficult to remove by cotton or antiseptic solutions. The application of alteratives without the previous removal of the mucus is quite without effect, as very little of the solution comes in contact with the membranes. For the removal of this plug, Doctor Talley recommends that the cervical canal be washed with the official *lime-water* (U. S. P.), warmed, and applied by means of small pieces of cotton twisted on the end of an applicator.—*Polyclinic.*

Hydrochlorate of Chalk for Pruritus Ani.—Take a piece of cotton gauze two or three centimeters long, which has been moistened with a solution of Hydrochlorate of Chalk, 2:100. Push up in the anus, and leave in place until sharp smarting commences. Then remove and wipe surface of anus dry, when the itching immediately ceases.—If it should return, repeat the same procedure. It appears that this solution simultaneously clears up all the eczematous patches about the anus and scrotum, a condition so generally concomitant with an anal itch.—*La Semaine Médicale.*

Medicine for Man, Not Man for Medicine.—Enthusiastic advocates of the use of compressed tablets seem disposed to trust to them too exclusively on account of convenience in dispensing them and their portability, which makes them acceptable to the physician and to many patients. We believe, however, that the best results are to be had from a skillful adaptation of different forms of medicines in different conditions and according to the exigencies of each case.—Doctor John V. Shoemaker.

Chloral in Hæmoptysis.—In the *Berliner Klinische Wochenschrift*, Doctor Pal praises Chloral Hydrate very highly in the treatment of pulmonary hæmorrhages when administered per rectum in doses of from fifteen to thirty grains. He declares its action is usually manifested in from thirty to forty minutes, and that it is rarely necessary to repeat the dose; moreover, it sometimes acts as a prophylactic. A normal heart is, of course, essential.

Sparteine in Chloroformization.—By the hypodermatic injection of one centigramme of morphine together with three to five centigrammes of Sparteine sulphate, before chloroformization, one may obtain a rapid response to the anæsthetic, of which but a slight quantity will be necessary to maintain anæsthesia. The pulse continues regular and full, even if toxic apnœa set in.—Langlois and Murange, in *Revue Internationale de Bibliographie Médicale.*

For Neurasthenia.—The following was a favorite prescription of Sir Andrew Clark's for various kinds of neurasthenic debility:

℞ Acid phosphate, 1 drachm.
Fl. ext. coca, ½ drachm.
Fl. ext. damiana, ½ drachm.
Tr. nux vomica, 10 minims.
Syrup of ginger, 1 drachm.
Water, q. s. ad ½ fluidounce.

For one dose. To be taken in water at 11 A.M. and 6 P.M.

Cimicifuga and Caulophyllum.—Cimicifuga is very much valued in obstructed menses, leucorrhœa, rheumatism, and neuralgia. It may be compared with Caulophyllum, or blue cohosh, in its action upon the female organs, since both are valuable in the rheumatic diathesis and used in hysterical spasms. Caulo-

phyllum, however, best relieves rheumatism of the small joints, as the fingers.—*Chicago Medical Times.*

Pulsatilla.—*Pulsatilla nigricans* acts on all mucous membranes, and thereby relieves catarrhal conditions of mucous surfaces; also upon synovial membranes, and hence is valuable in arthritic inflammation—rheumatism. It acts upon the generative organs of the female sex and checks thick, yellowish leucorrhœa. It relieves rheumatism that is better in the open air and in motion.—*Medical Arena.*

Eupatorium Purpureum.—Queen of the Meadow, especially when combined with hair-cap moss, is one of the most positive diuretics. The fluid extract is the most reliable preparation. In dysuria or vesical irritation it affords quick relief if given alternately with lithium carbonate. By drinking water off the tops of the plant, horses are relieved of certain forms of "heaves."—DOCTOR J. BELLAIRE.

Staphysagria.—Larkspur seed acts chiefly on the genito-urinary organs, especially upon the prostate gland in men and the cervix uteri in women. It relieves oversensitiveness of the sexual organs, and especially debility after sexual excesses or self-abuse. It is a remedy for styes, nodosities and itching of the eyelids; also for relaxation of the stomach.—*The Clinic.*

Useful in Neuroses with Sleeplessness and Constipation.—

℞ Ext. cannabis indica, ¼ grain.
Ext belladonna, ¼ grain.
Aloes and iron pill mass, ¼ grain.

For one pill, to be taken at bed-time, every night, if required. The last ingredient may be varied according to case.

The Treatment of Diphtheritic Laryngeal Stenosis.—Brenner Berent (*Therap. Monatshefte*) has in two cases seen remarkably good results follow painting with Cantharidal Collodion of a spot the size of a half-dollar over the thyroid cartilage.

Hay Fever.—Recently Sabadilla has been heralded as an almost specific in vaso-motor coryza.—*Exchange.*

Retention of Urine in the New-born.—Aconite in very small and often repeated doses is advised.

Medical Progress.

DIABETES FROM MENTAL SHOCK.—There is a form, and a very severe form, of diabetes which is brought on, especially in the young, by mental shock. I treated on this a good many years ago, owing to my attention having been turned to a striking case of the kind; and recently I have met with two other examples of the same nature The first case that came under my notice was that of a boy about twelve years of age, the son of a carpenter. He was a very bright little fellow, and had enjoyed all his life the best of health, escaping remarkably from the usual infantile and childish diseases. Near where his father lived was a woodyard, kept by a very ungainly, Quilp-like sort of fellow, who delighted in rough jokes and in threatening those weaker than himself. One of the freaks of this man was to tie up a very savage dog to a kennel in the yard. The pathway leading to the office passed this kennel, but was so far distant that the dog at the length of his tether could not reach it by four or five feet. The little boy went down with a message from his father, knowing nothing of the chained animal; and when the dog suddenly burst out upon him, it so frightened him that he stood half-paralyzed, screamed, became faint, and got back home extremely exhausted. As if he had been mechanically injured in the brain near the fourth ventricle, he began at once to pass large quantities of urine, which the practitioner who was called in thought at first, naturally enough, manifested a mere hysterical condition. Soon, however, it occurred to him that the diuresis was too prolonged. He therefore tested for sugar, found it in abundant quantities in the urine, and brought the patient to me. The poor boy remained under our care until his death from diabetes, the disease running its course with great rapidity and defying every means of cure. We medical men were of opinion that the savage who kept the woodyard was liable to an action for the injury done; but the lawyers whom his father consulted, including eminent counsel, were of opinion that there was no sufficient proof of a legal kind that could constitute a ground for action. They urged that a precedent was wanted to support the argument that diabetes could be induced by mental shock in the manner suggested; and so the idea of a trial was abandoned.

I have now under my care a case of a similar kind. A young woman took fright in consequence of a fire which broke out near to her—on the floor, in fact, where she slept.

She was exceedingly alarmed, and was seized quickly afterwards with diabetic symptoms in an extreme degree. She is twenty-five years of age, and up to the time of her attack had enjoyed an unusually healthy life; but there is in her history this curious fact, that her brother, one year older, a few months ago died from acute diabetes immediately following a severe mental shock.

Physiologically there is nothing peculiar in these phenomena, for perhaps there is no fact more clearly established than that certain mechanical injuries to the brain are capable of setting up the diabetic condition. I have noticed that men engaged in whitewashing ceilings sometimes become giddy during their work, from the prolonged position of the head thrown backwards, and that a temporary diabetes may then present itself. Four examples of this kind came before me when I was carrying out my inquiries on occupation and health. Mental shock seems to lead to a similar state—it may be by rupture of a minute vessel in the brain, or by a slight effusion. Whatever is the exact pathology, the mischief inflicted leads to one of the most serious types of the diabetic disease, and I call the attention of other practitioners specially to it, that they may add their observations to mine on a very important practical and medico-legal question.—Sir Benj. W. Richardson, in *The Asclepiad.*

Serum Therapy—Two Views.—*The Positive:* In going over the work in Berlin I was very much impressed by the fact that, among these men who had been working up the subject for two or three years, or longer, and who had treated a large number of cases of diphtheria, the first series of five hundred having just then been completed, there was not the faintest shadow of a doubt as to the value of the antitoxin treatment. They seemed to feel absolutely convinced that the experimental stage had been passed, and that the value of antitoxin as a specific in the treatment of diphtheria was a thoroughly established fact. That seemed to me a most surprising and a most encouraging feature of the question at that time. And when one turns to the other side and considers for himself the evidence to justify belief in the treatment, it seems to me he has even a stronger basis for confidence than the positive testimony of others.—Doctor Herman Biggs, in *Medical Record.*

The Negative: Highly favorable as have been the majority of the numerous reports on the serum treatment of diphtheria, signs are not wanting that their roseate hue may somewhat fade before the searchlight of unimpassioned criticisms. Only recently Doctor Hansemann, one of Professor Virchow's assistants, drew attention to the liability of antitoxin to increase the diphtheritic tendency to nephritis, and both our home and foreign correspondents have given further evidence in this direction, as well as of other ill-effects in the shape of an increased proportion of deaths by cardiac failure, septicæmia, etc. Reports which simply give statistics of decreased mortality, without any definite statement as to the mode of death, can afford us no information as to whether the effect of antitoxin on the vital organs is in excess of that which has been found to obtain under the older treatment. Since reliable information in this direction can only be derived from carefully recorded autopsies, it is to be hoped that in every case of death under this treatment a post-mortem examination will be made, so as to prevent us falling into a fool's paradise, the ejection from which could not but be attended by ignominy.—*Medical Press and Circular.*

Obesity. — On several occasions stout female patients have asked my advice as to how they could reduce their size. I at once ask, "Are you thirsty?" and as a general rule am told, "Very!" Some even assure me they are obliged to rise at night to obtain water. This experience, coupled with the fact that one-third of the human body consists of fluid, led me to advise restriction of fluids, and that those allowed be as diuretic as possible. My contention is that *fluids of all kinds fatten or bloat the body when used in excess.*

It is obvious that if a healthy man or woman have active kidneys and a normal perspiring skin, the fluids used cannot accumulate in the blood or tissues; and I have remarked that stout patients almost all drink in excess of the amount of urine secreted. I have known stout patients who had sought the advice of so-called specialists on obesity being told to be most particular with regard to food, amount of exercise, etc., while (they state) they were told nothing about the restriction of *fluids* or how to get rid of such by purgatives, diuretics, and diaphoretics. I do not at all profess to treat obesity, but acting on the principles enunciated in this short paper I prohibit *cold drinks* of all kinds, a hot one assuaging the thirst much better. By the exhibition of saline purgatives in hot water taken each morning (fasting), diuretics, and diaphoretics, I find I can promise a stout

patient *with healthy organs* a considerable reduction of body weight, and in a short time. When a jockey is training and wishes to reduce his weight he purges and sweats himself and thus gains the desired result (perhaps not without subsequent injury); but the fact remains that the withdrawal of fluids, either by abstention or the means stated above, reduces both size and weight, ministers to the health and comfort of the body, and when judiciously carried out cannot possibly cause any permanent injury.—ALEXANDER DUKE, in *Medical Press and Circular.*

PSEUDO-CHANCRES.—Doctor J. P. Gayon, of the City of Mexico, states that any simple ulceration under the local irritating influence of calomel, a caustic, or even from inflammation of the tissue, may simulate chancre. The site of the lesion exerts a great influence upon the development of induration, for in the nose and the balano-preputial sulcus the anatomical disposition of the tissues and the lack of elasticity contribute to produce circumscribed indurations. Any lesion of the superficial layers of the skin of a herpetic eruption in these regions may be complicated with an induration, without any specific element. Any lesion or eruption in the balano-preputial sulcus is accompanied by more or less induration. Certain syphilides of the mucous membranes may become indurated and simulate a primary sore. This variety, being of the papulo-erosive form, and from its site, indolence, volume, configuration, evolution and course, may so simulate a primary sclerosis that confusion is easy. In the third stage the gummata of the genital organs during ulceration may assume the appearance of the primary sore. They first feel like a foreign body beneath the skin, from their cartilaginous hardness. After a time they approach the skin and, by ulcerating, may resemble a chancre.—He concludes that simple ulcerations of the genitalia, by reason of their site or inadequate treatment, may simulate chancre; that chancroid, either from these same causes or from developing in a syphilitic organism, may give rise to confusion; that certain secondary syphilides and tertiary syphilomata may perfectly assume characteristics of the initial lesion of syphilis.—*Journal of Cutaneous and Genito-Urinary Diseases.*

CLINICAL VALUE OF RENAL CASTS.—Many clinicians can recognize casts under the microscope but fail to interpret their significance. Doctor A. E. Austin, in the *International Medical Magazine*, separates them into definite groups and draws inferences accordingly. The hyaline and blood casts merely indicate irritation and hyperæmia; yet closely associated therewith is amyloid degeneration due usually to suppuration – prognosis good if the source of suppuration be removed. Epithelial, granular and fibrinous casts indicate acute inflammat on of the renal tubules. The epithelial are indicative of the mild or desquamative stage, with urine slightly under normal in amount, specific gravity 1.030, high color, albumen a trace, numerous hyaline casts, free blood and renal epithelium, going on perhaps to brown or pale granular casts with diminution of the solids of the urine. The fatty and waxy casts, when numerous and persistent, indicate long-continued chronic inflammation of the kidney, with bad prognosis; here blood and epithelial cells are absent, and the urine is diminished in amount with increased specific gravity. The pale granular and small hyaline casts point to fibroid kidney. Aside from microscopical appearance, the general condition of the patient, age, sex and previous history must be taken into consideration. It should be remembered that the diagnosis of casts alone may mean little, but the kind of casts in abundance is the important point.

ROBERT LOUIS STEVENSON ON THE MEDICAL PROFESSION.—"There are men and classes of men who stand above the common herd: the soldier, the sailor, and the shepherd not infrequently; the artist rarely, rarelier still the clergyman; the physician almost as a rule; he is the flower (such as it is) of our civilization; and when this stage of man is done with, and only remembered to be marveled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practice an art, never to those who drive a trade; discretion tested by a hundred secrets; tact, tried in a thousand embarrassments; and what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick-room, and often enough, though not as often as he wishes, brings healing."—*British Medical Journal.*

HEADACHES OF PREGNANCY.—These, if persistent, should always be regarded with suspicion. They too frequently give evidence of uræmia and threatening eclampsia.—*Glasgow Medical Journal.*

The Medical Age.

Vol. XIII. DETROIT, MARCH 11th, 1895. No. 5.

Original Articles.

PSEUDO-CONTINUED FEVER.

BY DOCTOR JOAO VINCENTE TORRES HOMEM.*

The sole difference between pseudo-continued and simple remittent fever is, that in the former the diminution of temperature is barely some tenths of a degree (Centigrade), rarely more than half a degree, so that it is very difficult and at times impossible to verify the existence of remission. I have observed cases where high fever continued during two, three, or more days, without any explanatory lesion or the manifestation of any other symptom leading to the presumption that it was a case of even mild typhoid fever in the first stage. It is in such cases that a dose of quinine, given after the promotion of profuse perspiration by means of diaphoretics, clears up the diagnosis, the pyrexia becoming manifestly remittent.

The pseudo-continued type in malarial fevers is very rare with us, and, in proportion as genuine typhoid is becoming more frequent, it grows rarer still. Yet it is incumbent on us not to lose sight of it, inasmuch as the omission of appropriate treatment in such instances means the death of the patient within a few days. I saw, in the hospital of Nossa Senhora d'Ajuda, a young Brazilian, twenty-four years of age, who had had fever for two days and who complained of an acute and very intense pain in the right hypochondrium; the liver was enlarged, and, believing it to be a case of acute hepatitis, I treated the patient accordingly. Two days after the use of leeches at the verge of the anus, wet cups and fomentations with mercurial ointment applied to the hepatic region, and calomel and nitre in large doses, all the local phenomena had disappeared, but the fever continued without appreciable remission. I then decided to give three twelve-grain doses of quinine in the course of the day, dissolved in sulphuric lemonade. After the third dose the thermometer fell to 97.2° and the patient's body was bathed in profuse perspiration. I then ordered two tablespoonfuls of *Agua Ingleza* every hour, and good meat broth. The next day at 10.30 A.M. the temperature was 98.6°; I gave twelve grains of quinine; between five and six o'clock in the afternoon the young man had shivering-fits and head pains, and the temperature rose to 101.6°. There was not the least doubt that it was a case of malarial infection, revealed at its beginning by a continued fever, and afterwards by an intermittent paroxysm—thanks to the effect of specific medication. The following morning the thermometer indicated 98.6°; the patient took eighteen grains of quinine, and convalesced rapidly without further paroxysms.

A young mulatto entered the clinical ward of the hospital, presenting a very intense febrile reaction, with all the characteristics of the fever which precedes the manifestation of variola. Two days elapsed, and the fever continued with the same intensity without the eruption appearing, in spite of the therapeutic measures adopted to that end. The tongue, which at the beginning was still rosy and moist, became furred and dry. I ordered the patient a purgative of calomel, and, after it had operated, resorted to quinine. A few hours after the second dose of this drug, the temperature, which until then had stayed at 104.4°, fell to 101.5°; it remained at this point until 9 A.M. of the next day, when the patient took eighteen grains more of quinine, and in the afternoon the thermometer indicated 99.1°. The specific treatment was employed on a decreasing scale for three days longer, not because any paroxysm had appeared, but

* Translated by Surgeon Geo. P. Bradley, U. S. Navy.

for the purpose of making the cure radical and certain.

In certain cases, pseudo-continued malarial fever is accompanied by congestion of some important viscus, like the brain, cord, lung, etc., and diagnosis at the outset becomes very difficult. Pleuro-pulmonary hyperæmia especially leads the physician to think of a simple pneumonia, inasmuch as the patient complains of severe stitch in the side, cough and dyspnœa, and spits blood; if together with these symptoms we take the initial chill, which is almost never wanting, and a temperature of 104° or 104.5°, the error of diagnosis becomes pardonable. Yet there is, in these difficult and embarrassing cases, one circumstance of great value, to which the physician should always attend, for it greatly enlightens his judgment, or at least puts him on his guard—namely, the absence of physical signs, especially those furnished by auscultation, which are present in a true pulmonary inflammation. There is no fine crepitation, even when the patient coughs; there is no bronchial respiration nor bronchophony; the ear barely perceives a very fine friction sound, superficial and circumscribed (due to the dryness of the pleura), and weakening of the respiratory murmur (due to the diminution in capacity of the pulmonary vesicles, connected with excessive fullness of the vessels which pass over their walls).

There entered the hospital of Nossa Senhora d'Ajuda a patient in exactly this condition: he had had an intense and prolonged chill; an acute and pricking pain below the right nipple, cough, dyspnœa and extreme febrile heat (105.5°) were present. The interne who received him (one of the most distinguished students of the sixth year of our university), in spite of the absence of the characteristic physical signs, diagnosed a pleuro-pneumonia and prescribed accordingly. The next day I diagnosed pseudo-continued malarial fever complicated by pulmonary congestion, and prescribed the sulphate of quinine exclusively for the space of four days. The patient, who was a young negro and very robust, recovered promptly.

In February, 1873, I saw a patient in Sao Christovao who presented a very singular array of symptoms, which environed the diagnosis with serious difficulties. He had high fever, which dated from forty-eight hours back, was somewhat delirious, and had incomplete paralysis of the upper and lower extremities and the bladder, accompanied by general hyperæsthesia; the slightest pressure made on any part of the body, particularly on its upper half, excited cries of pain. There was slight congestion of the liver and spleen; the tongue was slightly furred and the bowels constipated. At first sight it seemed a case of spinal meningitis; but the absence of opisthotonos, the high degree of fever (105.2°), the hepato-splenic congestion, and above all the very important circumstance of these symptoms having appeared rapidly, reaching their maximum gravity in two days, led me to presume that it was a malarial pyrexia of continued type, attended by hyperæmia of the parts contained in the spinal canal. The treatment I advised, and which produced splendid results, was as follows: Twelve leeches to the verge of the anus; twelve wet cups along the spine; calomel in purgative doses; and then half a drachm of quinine in solution, given in three doses. Twenty-four hours after this treatment the patient was extraordinarily improved. The quinine was continued for several days, in decreasing doses, and convalescence was manifest twelve days after.

In the treatment of continued malarial fever, quinine should be given as soon as the diagnosis is established, even though the febrile reaction be intense. But it is important for the physician never to forget that before administering the precious specific he should fulfill certain previous indications—a condition at times indispensable to the absorption and action of the drug: he must combat the gastro-intestinal disturbance, by means of an emetic and cathartic; remove viscera congestion by blood-letting, general or local profuse or moderate, in accordance with the extent and severity of the hyperæmia, age sex, temperament, and other individual peculiarities of the patient, and according to the condition of the pulse and date of the disease.

There are continued and pseudo-continued pyrexias observed in Rio de Janeiro which are not of malarial origin. The fever

denominated by the older authors *synochal*, *angeiosthenic*, *gastric*, and *bilious*, are likewise met with here, produced by general morbigenic causes. Chill, insolation, dampness, irregularities of diet, indigestion, etc., often give rise to the appearance of febrile reaction, ordinarily of little severity, accompanied by various symptoms connected with the organs the functions of which are by preference deranged. The digestive system is that most frequently compromised in these cases; sometimes it is the stomach that suffers, and the patient presents all the symptoms inherent to gastric disturbance (gastric fever); sometimes it is the biliary system, and then there is an excess of bile thrown into the small intestine, part of which flows back into the stomach; the furred tongue assumes a yellowish color, there is great bitterness of the mouth, frequent nausea, and at times bilious vomiting and diarrhœa; the liver is a little enlarged (*bilious fever*, *gastro-bilious fever*). In other cases the temperature is very high, the face becomes flushed and red, the eyes injected and weeping, the headache is intense, the pulse strong, full, hard, and frequent (*angeiosthenic fever of the older authors*, *inflammatory fever*). It is not rare to meet in practice with a certain number of persons who, under the influence of the most insignificant causes, become feverish for several hours, without presenting any morbid symptoms except elevation of temperature, frequency of pulse, and a certain degree of malaise which obliges them to seek repose (*febris ephemera*); this morbid condition is nearly always due to sudden checking of perspiration from a chill, and yields promptly as soon as the functions of the skin are reëstablished.

Simple gastric fever, according to the view expounded in the preceding paragraph, yields in twenty-four hours, or two days at most, after the use of emetic-cathartics and acid diluent drinks. An emetic of ipecac and five or ten centigrammes of antimony—thirty or forty grammes of sulphate of magnesia in case the first prescription does not produce large evacuations, — and lemonades afterwards, are the means to which the physician should confine himself. If in spite of these methods the fever continues, with exacerbations at certain hours of the day, the use of quinine becomes necessary. Any one waiting for the febrile reaction to become clearly remittent or intermittent before resorting to this remedy will oftentimes be painfully undeceived by seeing a series of grave symptoms due to a pernicious paroxysm make their appearance. In many cases, as soon as the emetic and cathartic have acted, I make use of quinine, even though the disease dates from a few hours only; it is a method of prudence and precaution the more commendable according as the patient's condition is satisfactory and the axillary temperature near the normal. In a city like Rio de Janeiro, where the malarial element is always predominant in the medical constitution, and where the complications produced by it in the course of acute diseases are so frequent as well as so symptomatically various, where malarial poisoning at times reveals itself by a single simple febrile paroxysm, and a pernicious paroxysm follows this with nothing to foretell it, the practice which I pursue, and which I always counsel to my pupils, cannot be without advantage. After the first dose of quinine—never less than one gramme for an adult—we should wait for the further progress of the disease to indicate whether or not to insist upon the use of the remedy. How often does a patient present himself with a simple fever, apparently not of the slightest gravity, attributed by him to checking of perspiration (commonly termed a cold), which notwithstanding is the expression of a paroxysm due to malaria! How often does the sulphate of quinine, opportunely administered—not as being imperatively demanded, but as a simple precautionary measure—prevent a pernicious attack!

There entered the University Hospital a Portuguese lad, fourteen years old, a clerk in the Prahia dos Mineiros, with fever and pain in the head. Except the high temperature (102.6°), the frequency of the pulse (104), and the frontal headache (which was not severe), no morbid symptom was observed. The abdominal viscera were normal; the tongue was slightly coated. The disease dated scarcely eight hours back. The interne who received the patient prescribed at 5 P.M. a diaphoretic mixture, which produced copious perspiration. At the visit next morning I found the boy entirely apyretic and

without headache; he considered himself well and asked for food. I prescribed one gramme of sulphate of quinine, which was taken in my presence, for he refused it on the ground that there was nothing more the matter with him.

This circumstance happened before a large number of students, and was noticed on account of the severity with which I threatened to punish the child, who obstinately rejected the vessel containing the remedy, not knowing that he was rejecting life. At 3 P.M. the patient was seized with an intense chill, followed by fever; the interne found him somewhat delirious, with the liver a little congested, and an axillary temperature of 103.6°; a severe paroxysm had appeared, notwithstanding the dose of quinine taken at 9 in the morning. Is it not probable that this paroxysm would have been very grave, if not even fatal, had not the drug been prescribed? The third attack was manifested only by some elevation of temperature (100.8°). At the end of ten days the lad left the hospital, cured.

Let us suppose for a moment that my patient had had nothing but an ephemeral fever, caused by suppression of perspiration, and that the dose of quinine he was forced to take was unnecessary; what harm could have resulted? Absolutely none. This and many other cases I have observed, in private practice as well as in hospitals, led me to give my pupils the following advice: "Whenever you observe high febrile reaction unaccompanied by any lesion which can account for it, give the patient a dose of quinine as soon as he becomes apyretic; you will never have occasion to regret such procedure; on the contrary, you will avoid cruel deceptions for your understanding, and acute tortures for your conscience."

When the fever assumes the bilious character, without, however, being the bilious remittent fever of the tropics, calomel in purgative dose should be employed at once, or podophyllin, the cholagogue properties of which are well known. After the appearance of bilious stools thus produced, we should have recourse to drinks containing nitre and to strongly acidulated lemonades. If the liver is greatly enlarged, due to active congestion of its parenchyma, the physician cannot dispense with the use of wet cups to the hepatic region, followed by resolvent applications of mercurial ointment and extract of belladonna. Ipecac is always indicated in this case, before or after the calomel, when the tongue is thickly coated.

Although I recognize that mild bilious fever, very different in its course and its gravity from the so-called bilious fever of the tropics, may in some cases be due to other causes than the malarial miasm, and the patient's cure be effected without the use of quinine, yet, from fear of a pernicious paroxysm, which may supervene insidiously without being announced by simple intermittent attacks, it is very rarely that I do not resort to this heroic treatment after the vomiting and bilious stools produced by ipecac and calomel.

This practice, which I have always followed, is that followed by the most eminent practitioners of Rio de Janeiro; even those who most fully embrace the opinion of Felix Jacquot, who admits the existence of a malarial bilious fever and a climatic one, do not lay aside quinine.

In a great number of cases irritability of the stomach does not allow the administration of the drug by the mouth, since it is immediately rejected by vomiting; we should then resort to enema, dissolving the quinine in a small amount of fluid, and adding a few drops of laudanum.

In the inflammatory or angeiosthenic fever —so termed on account of the strength and fullness of the pulse, the high temperature, intensity of the headache, redness and flushing of the face, and injection and brilliancy of the eyes—the physician is often obliged to resort to blood-letting, especially when the patient is young, robust, and of sanguine temperament. General bleeding is only exceptionally employed; depletion is almost always effected by means of leeches applied to the verge of the anus.

Tartar-emetic in the dose of ten centigrammes, calomel, and nitre are of great service in this species of pyrexia; sulphate of quinine is almost always employed among us, either because the course of the disease renders it indispensable, or as a measure of prudence and precaution for the reasons already set forth.

Rio de Janeiro, Brazil.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 113.*]

In the domain of pathology the Arabs added only a very small number of observations to those contained in the works of Galen. The most interesting of these pertain to eruptive fevers. Most of the writers contented themselves with making an inventory of the acquisitions of the past, as did Guy de Chauliac, and this was about all they could do under existing circumstances; although they did not make discoveries, they prepared the way for their successors.

Two men about this time did a great deal in the direction of creating a desire for post-mortem study of cases, and in illustrating and succinctly describing symptoms.

The first of these was Benivieni, a Florentine, who died in 1502,—the date of his birth being uncertain. To him more than to any other we owe the commencement of the study of gross pathology and pathological anatomy. He was the first to consider the knowledge that might be obtained by opening bodies for the sole purpose of ascertaining the location and cause of the diseases from which they had died. As Malgaigne remarks, "a eulogy which he merits and which he shared with no other person, and which has not been accorded to him up to this time by the many historians of surgery who have superficially searched among these precious sources, is that he was the first who had the habit, felt the need, and set the useful example, which he transmitted to his successors, of searching in the cadaver, according to the title of his book, for the concealed causes of disease." The work referred to by Malgaigne was entitled "Concerning Some of the Secret and Strange Causes of Disease," and was published in Florence in 1507. It is poor in quotations, but rich in original observations, which pertain especially to the ætiology of disease, and gives a very concise symptomatology and history of each affection of which it treats, as well as a pathological explanation. Benivieni's observations on gall-stone, on the anatomical lesions of heart diseases, and on the conveyance of syphilis from the mother to the fœtus, were original, as well as many observations concerning the presence of worms and other parasites in the body.

He did not limit himself to dissection of his own cases, but sought autopsies in the cases of others. He examined the bodies of those who had been hung, always thinking to find in them something of interest. In this regard he was followed by one already mentioned, namely Eustachius.

After these two the men who most cultivated pathology and anatomy in the sixteenth century were Rembert Dodoens and Marcellus Donatus. The former was born in 1517 in Mecheln, traveled extensively, was physician to Maximilian II. and the Emperor Rudolph, and died in 1585. The latter lived and worked in the latter half of the sixteenth century, the dates of his birth and death being somewhat uncertain.

The next man whom we must mention is one who did a great deal for internal medicine, pathology, and anatomy. Jean Fernel, who has been surnamed "the modern Galen," was born in Clermont in 1497. Even as a boy he showed great aptitude, and very early made himself a reputation in philosophy, law, and mathematics. In 1530 he was received as doctor with the unanimous applause of the entire faculty of Paris. He seems to have been stimulated by this only to more extended study; in fact, so hard did he work at his studies that his friends became seriously alarmed for his health and remonstrated with him; they received for reply, "*Destiny reserves for us repose enough.*" He became physician to King Henry II. of France, and in the midst of a very extensive practice undertook to collect all the medical knowledge scattered in the Greek, Arabic, and Latin works, in order to form from it a body of doctrines. His work was written with a purity and elegance of Latin that reminds one of Cicero. Throughout its pages he was philosophic and sought to unite the apparently irreconcilable doctrines of Plato and Aristotle.

He divided medical science into three great sections—physiology, pathology, and therapeutics. In his explanations of disease he was too often fanciful, following the speculations mainly of Galen, and making

*Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

free use of the hypotheses of humors, temperaments, vital spirits, etc.; but the following statement of his would do credit to a trained pathologist of to-day: "As for myself, I shall never believe I have profound knowledge of any affection if I do not know positively, just as if I could see it with my eyes, in what part of the human body is the disease, its primitive seat, what suspicion of organic lesions constitute it, whence it proceeded, if it exists idiopathically or by sympathy, or if it be kept up by some exterior cause. He who pretends to be a rational physician must sound each of these subjects and discern them by certain signs." The problem which he thus set himself he certainly, for his own part, considered as solved, although it was not long before his solutions were set aside and the original uncertainty reappeared.

In therapeutics he very early laid down the fundamental maxim that every disease must be combated by contrary remedies, justifying this by every species of argument —amounting to this, that every disease must be combated by its contrary because all that cures a disease is contrary to it. This was in part the doctrine of "*Contraria contrariis curantur*," the antithesis of the equally absurd sophism, "*Similia similibus curantur*," which three hundred years later was erected into an excuse for the foundation of an alleged new school. There can be no doubt that Fernel rendered very great service to his time and to subsequent generations, despite the fact that his recommendations and statements were too often founded upon sophistry.

Just here we must digress for a moment to consider the status of bleeding. Hippocrates and Galen had advised to bleed largely from the arm on the affected side in pleurisy and pneumonia. That practice was gradually abandoned as Greek traditions were lost sight of, and finally the Arabs substituted for it something entirely different, namely, pricking a vein in the foot in order to let blood flow drop by drop. Their method prevailed throughout Europe until the commencement of the sixteenth century, or about the time when Fernel appeared upon the scene. A Parisian physician named Brissot had revived the ancient (the Greek) practice during an epidemic of pleurisy, and had obtained there by astonishing success, which he hastened to publish, commending the method employed. He thus created a great uproar in the medical world. The innovation found foes and defenders, and disputes grew warm, even to the fever point. Finally the ancient method was generally revived, and Fernel accepted it.

Felix Plater was born in 1536 in Basle, Switzerland, and died in 1614. He had several sons who made their mark in medicine. In his large work, which preceded that of Fernel, he took perhaps the first step in an unexplored route, namely, in the classification of disease *according to the totality of apparent symptoms*. Defective as this classification appears in our eyes, its author lived a long life as a very distinguished practitioner and professor in his native town.

Giovanni Batista Porta was born in Naples in 1536, traveled extensively in Italy, France, and Spain, and founded in 1560 an Academy of the Segreti. He was accused of magic, and was compelled to refute the charges in Rome. He died in 1615, having been one of the leading scientists of his time and the founder of modern optics. In the first edition of his "*Magia Naturalis*," published in Naples, 1587, is found the first description of the camera obscura—of course in a very incomplete form and without lenses.

Severino was a celebrated surgeon of Naples. He was born in 1580 in Calabria, studied in Naples, became a doctor in Salernum, and then became professor of anatomy in his native town. For a long time the victim of intrigue and of persecution by the Inquisition, he was finally driven out of Naples, but was called back by the populace. He then became the most celebrated teacher of his time, writing extensively on a variety of subjects. He died in 1656 of the plague, an epidemic of which was at that time raging in central Italy.

Arriving now at the surgery of this Age, we find that matters were more chaotic than in other departments of medicine, and for reasons which are easily given and appreciated. While ordinarily external diseases are more easily discerned than internal, and while in a corresponding degree they can be more satisfactorily treated—while, in other

words, external pathology has ordinarily taken precedence of internal in professional as in lay minds—this view seems to have been inverted for a time during the Middle Ages. Previous to the period now under discussion the sciences had generally declined in Europe, and surgery had fallen even lower than medicine—for the reason that medicine was in the hands of the priests, who had at that time something of a liberal education, while the practice of surgery was abandoned to a class of ignorant barbers, bathers, and bone-setters. No mechanic or artisan could take as an apprentice any youth without a certificate affirming his legitimate birth and that he came of a family in which there were neither barbers, bath-keepers, shepherds, nor butchers. Among the men who were thus made social outcasts were those into whose hands most of the surgery of the fifteenth century fell. This was particularly the case in Germany, and other European countries were little in advance. We have seen that in France and in Italy Lanfranc and Guy de Chauliac did their best to rescue surgery from the hands of these men, but that their efforts did not prevent it from being completely abandoned by the clergy who devoted themselves to the practice of medicine.

When we come to inquire the reason for this—in other words, why an art so useful as surgery, and one which made such requirements for knowledge, sagacity, and dexterity, whose necessity was almost continually felt, particularly during those troublous times of almost constant warfare, should be so neglected by men who could best comprehend its utility and respond to its requirements—it is difficult to find a satisfactory answer. The social condition of the times sheds some light upon the question. The nations of southern Europe were socially divided at that time into the nobility, who were nearly always at war; the clergy, who monopolized learning and filled the so-called liberal professions; and finally the common people, who were common prey for both the other classes, and who yet had to support both without having any privileges of their own. While the practice of medicine was a clerical right, the canon of the church prohibited physicians from drawing blood, under pain of excommunication; and hence surgery, shunned by the priests, to whom it naturally belonged in connection with the practice of medicine, fell into the hands of the ignorant and vulgar, who practiced it in a purely mechanical way without knowledge or appreciation of its possibilities. In addition to this, there was an almost total lack of detailed and precise anatomical knowledge, and but small reason to expect that the ignorant practitioners of surgery would feel the need of such knowledge. Moreover, most of the operators were itinerants, going from city to city, stopping so long as they had cases to operate upon or until some reverse forced them to depart. Most of these men limited themselves to one or two sorts of operations. Some operated for cataract, others for stone, others for hernia, nearly every one having a secret method which was transmitted to his posterity as a heritage.

In the history of medicine certain family names of itinerant operators have been preserved; for example, the Branca, the Norsini, in Italy, and the Colot in France.

Under such conditions there could be no such thing as the profession of the surgeon. The prejudice against dissection did not begin to abate until the thirteenth century, when a very few of the clergy dared in a very timid manner to perform surgical operations. Their numbers increased in the course of the fourteenth and fifteenth centuries, and in the sixteenth had become considerable. Most of the great anatomists of that period, such as Benivieni, De Carpi, Vesalius, Fallopius, and Fabricius ab Aquapendente, were great surgeons.

In due time it came about that while the clerical physicians were willing to descend to the rank of operators, the lay surgeons aspired to the rank of doctors of medicine. This transformation took place especially in France, the only country where at that time there was a special college of surgeons—the small brotherhood of St. Come, already alluded to, which was always contending against the faculty on one hand and against the barber surgeons on the other, with varying results, and which at last sought peace with the University and was received by it. This took place in 1515, and was the renaissance of surgery, not only for Paris but for the whole world. By this reunion the faculty acquired

authority over the barbers, who were admitted to their lectures and took courses in anatomy and surgery, gradually attaining a knowledge which entitled them to be called barber-surgeons; their rights were not curtailed, but made more difficult of procurement, for in addition to passing their initiation for the privilege of becoming barber-surgeons, they also had to pass an examination before the physicians and the two surgeons of the King, at Chatelet, for the right to practice surgery. The surgeons, as the price of their submission to the faculty, had, beside the university privilege, a sort of supremacy over the barbers; and thus it happened that the barbers were admitted to the rank of surgeons at St. Come, and that the surgeons of St. Come were admitted as barber-surgeons by the faculty of medicine. In this double capacity they approached nearer the profession of medicine, from which they should never have been separated, while surgery became an art which received numerous improvements. We must now devote a little time to the consideration of at least two or three of the men who most contributed to extend and elevate it.

Among those who most contributed to make the period of which we are now speaking a glorious one, raising himself from the lowest walks of life to the attainment of the highest professional honors, is Ambrose Paré, whose name will never die while the art of surgery is taught. Paré was born about the year 1510, at Laval, of poor parents. He was an early apprentice to the provincial barber-surgeons, after which a natural ambition for improvement led him to Paris (about the year 1532), where he studied three years at the Hôtel Dieu, and obtained the confidence of his teachers to such an extent that he sometimes operated for them. He never learned Latin, the language at that time of the books and of the schools. Paré was most fond of recalling his hospital experience; he counted it among the highest honors of his life that he should have enjoyed what he there did enjoy, and gives us to suppose that he was a favorite upon whom peculiar favors were conferred. In one of his writings, a physician of Milan having expressed astonishment at so young a man's knowledge, he remarks with pride: "But the good man did not know that I had been house surgeon for three years at the Hôtel Dieu de Paris." The functions of the barber apprentices in the hospital in those days were probably to make dressings and bleedings, and sometimes post-mortem examinations ordered by the chiefs, to assist the latter in their operations, and to act in case of emergency; in other words, to do about as the *internes* at present do. They probably found there a precious and rare opportunity for anatomical dissection, but it does not appear that they had regular clinical instruction. Communication between master and pupil depended absolutely on the pleasure of the former.

In 1537 Paré was made surgeon to the Colonel General of Infantry, René de Montijean, with whom he made his first campaign in Italy. (This was in the army which King Francis I. assembled in Provence with which to repulse the invasion of Charles V.) He had never seen war nor recent gunshot wounds, and only knew of them by what he had read in the writings of John de Vigo. This was at a time when it was the custom of surgeons to pour boiling oil into every amputation or other wound, in order to check hæmorrhage; and Paré's experience in this his first campaign put him in the way of his first discovery—a discovery which will never be forgotten. He has recounted in his "Book of Arquebus Wounds," and in his great "Apology," how after the affair of Pas-de-Suze he watched the other surgeons, dreaming of nothing else but to imitate them as far as he could; how the boiling oil gave out; how his anxiety about it prevented him from sleeping; and how to his great wonder he found that the wounded who had submitted to the operation suffered more than the others. This set him to thinking, and led him, a young man without name or authority, without letters or philosophical studies, to observe, to reason, and to combat a doctrine which was universally admitted and which the highest surgical authorities of the day sustained. At that time all authors who had spoken of gunshot wounds considered them as poisonous and complicated with burns; consequently they gave the precept to cauterize with boiling oil or a red-hot iron, and at the same time to administer certain alexipharmics which should serve as internal antidotes. John de Vigo, physician to Pope

Julius II., assures us that the danger of these wounds results from the round formation of the balls, from heat, and from the poisonous qualities communicated to them by the powder. His theory and the method of treatment above given had been adopted without contradiction until the day when Paré dared to utter the first protest against them.

After a campaign of three years, in which he lost his master, he returned to Paris and married. In 1543 he was in the army of Perpignan, in the service of De Rohan, grand lord of Brittany, where he gave continuous proof of his sagacity. It was after this campaign that his reputation, so well established among warriors and the nobility, inspired Sylvius with the desire of seeing him. Paré has recounted how, in a conversation which they had together, he insisted upon the then entirely new precept of which he had made many applications, that in order to extract bullets it was best to place the wounded in the position in which they were at the moment of injury. Sylvius, then at the height of his fame, invited the young physician to dinner, and listened to him with great attention while he explained his views on gunshot wounds, which made such an impression upon the mind of the host that he besought him eagerly to write them out and make them public. Encouraged by this advice from so high a source, Paré prepared his text, illustrated it, and in the year 1545 brought out his little work, which marked in a manner so glorious the revival of French surgery. It was published by Gaulterot, the sworn bookseller of the University of Paris, and was entitled "The Manner of Treating Wounds made by Arquebuses and other Fire-Arms, and those made by Arrows, Darts, and the Like; and also by Burns made Especially by Gunpowder. Composed by Ambrose Paré, Master Barber-Surgeon in Paris."

A few months later appeared the second edition, in which he still recommended the actual cautery in hæmorrhage; but each day he meditated upon the subject, and on one occasion discussed it with two surgeons of St. Come, submitting to them the idea that, since ligatures were applied to veins and arteries and to recent wounds, there was nothing to prevent their being equally applied to amputations. Both agreed with him, and opportunity soon presented itself at the siege of Damvilliers, when a gentleman had his leg crushed by a shot from the fortress. Paré made an amputation, omitting for the first time the use of the cautery, and had the happiness to save his patient, who, full of joy at having escaped the red-hot iron, said he had got clear of his leg on very good terms. This was in truth the actual renaissance of surgery, which had been to that time a torture, but which became thereafter a blessed art. It was a barber-surgeon who produced the double marvel. This took place in 1552.

In 1554, after other campaigns, Paré was made, without examination, master of the college of St. Come, and in 1559 was included among the surgeons of King Henry II. (who was killed in a tourney, in Paris, in 1559), which position he retained with Francis II. and Charles IX. The latter raised him to the highest position among his surgeons, and King Henry III. retained him, which caused the witty and true remark that the kings of France transferred him to their successors as a legacy of the crown.

Many anecdotes are related of Paré to show the remarkable esteem in which he was held by public and private citizens. For instance, in October, 1552, one of the most eminent generals of Charles V. laid siege to the city of Metz, and the Emperor came in person to join the army. Within the walls of this beleaguered city were gathered nearly all the nobility and princes of France. The city was defended by the Duke of Guise, and the besieged soldiers were at that time suffering alike from the attacks of the enemy, the results of the siege, and the rigors of a frightful winter. The Duke had established two hospitals for the soldiers, and had put into requisition the barber-surgeons of the city, giving them money with which to furnish their supplies. But these surgeons were sadly incompetent against the combination of unfavorable circumstances, consequently nearly all the wounded perished, and a horrible suspicion was roused among the soldiers that they had been poisoned. Under these circumstances the Duke dispatched one of his captains to the King to say that the place could hold out for ten months, and asked at the same time for fresh medicine. The King sent for Paré, gave him money, directed him

to take all the medicine he thought necessary, and furnished him a letter to Marshal St. Andre, who commanded in Verdun and who bribed an Italian captain for 1,500 crowns to introduce into the besieged city the celebrated surgeon. The expedition was perilous, and Paré himself would have willingly remained in Paris. But he entered Metz on the 8th of December at midnight, without an accident. Having passed already sixteen years in war, he was known to the chiefs and common soldiers. The day after his arrival, the Duke, who knew how to strike the imagination, presented him on the ramparts to all the princes, lords, and captains, who embraced and received him with clamor. By the soldiers he was received with shouts of triumph. "We shall not die," they exclaimed, "even though wounded. Paré is among us." From this time the defense was conducted with renewed vigor, and it has been universally conceded that to the presence of this single man the city was indebted for its salvation. The siege itself was not raised until after a terrific conflict. On the very day of Paré's arrival he began to treat the leg of one of the prominent officers, who for four days had been in charge of a charlatan and had suffered horrible tortures. The next day he decided to trephine another, who had been struck on the head by a fragment of stone, and who had been insensible for fourteen days. Both patients recovered.

The little brotherhood of surgeons of St. Come were ready to seize on every circumstance which might redound to their advantage, and desired to have within their ranks the man who enjoyed such great renown. They therefore admitted him to an examination, in spite of the statute which required that the candidate should understand Latin, and in spite of opposition by the professors of the University. They not only admitted him to all their degrees, but awarded him a reception—a hitherto unknown honor.

Paré in his time met with a success which to-day would be pronounced extraordinary. He seemed to inspire the wounded with the utmost confidence, and to possess greatness and firmness of character in the highest degree. It is perhaps even more extraordinary that with so strong a character he should have so long retained favor at court. In the midst of the excitement of camps, and a very extended practice, he found time to read all that had been published on his art, and to compose himself a great number of works, enriching all branches of surgery. Instead of keeping secret his inventions, as was the custom of the time, he made them as public as possible, saying in the preface of his large work on surgery: "For my part I have dispensed liberally to everybody the gifts that God has conferred upon me, and I am none the worse for it; just as the light of a candle will not diminish, no matter how many may come to light their torches by it."

Besides his smaller treatises, his large collective works passed through a number of editions, and were everywhere reprinted and studied. Not only was he great in surgery, but he attained a high degree of expertness in midwifery. Among other things, he restored the forgotten practice of podalic version in cases where this procedure is necessary. He died in 1590.

The doctrine of Paré on gunshot wounds was rapidly disseminated. From 1550, Maggi of Bologna advocated it without giving credit to its real author, and sustained it by decisive experiments. He observed that none of the wounded felt any heat, and that the torn portions of their clothing showed no trace of fire; and he shot balls through packages of powder without setting them on fire. At the same time Lange spread this view in Germany, and Botal of Turin took it up (keeping back, however, the true author's name).

While Ambrose Paré did not disdain to act as accoucheur, it was his friend and pupil Jacob Guillemeau (1550–1613) who in the sixteenth century most occupied himself with the practice of obstetrics. We owe to Guillemeau the first improvements that the moderns made in this art—for instance, the proposition to rapidly and artificially terminate parturition in cases of considerable hæmorrhage or when the woman is taken with convulsions during labor. Guillemeau supported this practice on the authority of Hippocrates, and operated on a great number of patients, proving its value and the danger of its neglect.

The Cæsarean operation was known to the ancient Greeks and Romans, but had been abandoned during the Middle Ages. It r

mained for the accoucheurs and surgeons of the sixteenth century to reëstablish it. Among others, Rousset, physician to the Duke of Savoy, who recommended it very warmly, reported several cases where it had a happy issue for both mother and child. He even reported the most remarkable case of all, that of a woman who was six times delivered by this operation, and who perished in the seventh confinement because, as he states, the surgeon who had been accustomed to operate on her was absent. Unfortunately this case is not authenticated.

Nothing shows better how the art of observation and accurate description of phenomena had progressed at the time of the revival of letters than the number of new diseases of which the authors of that period make mention. Then for the first time did one read of whooping-cough, miliaria, scurvy, plica polonica, syphilis, and raphania. It is scarcely credible that these diseases fell upon Europe at this particular time. It is more probable that they had a more ancient existence and were not recognized.

Even to-day medical men are divided in their opinions on the origin of syphilis, some believing that it was developed spontaneously in Europe toward the close of the sixteenth century, others that it was imported from the New World, others that it had a most ancient origin, and others yet that it represent a degenerated form of leprosy.

Certain it is that syphilis appeared almost simultaneously in all parts of Europe, at Bologna, Halle, Brunswick, in Lombardy, Apulia, Auvergne, and so on. Léonicenus attributed this sudden outbreak to an extraordinary inundation that occurred in all parts of Italy towards the close of the fourteenth century, and supported his views with the authority of Hippocrates and Galen. Others attributed it to astrological influence; while still others regarded it as a scourge of God with which to punish men and turn them away from unbridled libertinism. Fallopius thought venereal disease was engendered by the poison which the perfidious Neapolitans had thrown into the wells from which the French drew their water. These wild views simply indicate the spirit of the age. Oviedo published in 1545 a history of the West Indies in which he states that syphilis originated in America. He held that when Columbus returned from his second expedition to the New World, in 1496, his men enlisted under Gonsalvo de Cordova to go and fight the French, who had invaded the kingdom of Naples, and that they communicated to the French and Neapolitans the disease which they had brought from San Domingo. Unhappily for his veracity it is certain that syphilis broke out in Naples at least two years before the arrival of the Spanish fleet. It is equally certain that at none of the points at which Columbus touched on his return from his first expedition was there any manifestation of syphilis for years.

At this time the venereal disease, so-called, included those conditions which we now differentiate under the names of syphilis, chancroid, and gonorrhœa—a confusion of diseases which persisted even up to the time of John Hunter. It is worth while to publish this fact, since writers of two or three hundred years ago may not have meant by the term syphilis just what we would mean to-day. Without going into this question here, it is enough to say that one who reads intelligently may see in the sacred Scriptures unmistakable allusions to this disease. If the statements of David, as contained in the Psalms, are reliable, he was himself a serious sufferer from it. The ancient Greek and Arabian physicians make mention of lesions which could only be attributed to this disease; and the Latin satirists, like Horace and Juvenal, describe symptoms of a certain kind as being the fruit only of shameful practices.

It is most likely that the sudden appearance of syphilis in nearly all parts of Europe at about the same time, which has been regarded as so extraordinary, can be explained by the clearer distinctions physicians began to make between symptoms of this disease and those of leprosy. Arrangements for the cure of lepers were very complete, and such syphilitic patients as responded kindly to the treatment thereby established themselves in a very different category of disease.

The first writer to systematically consider venereal disease was Astruc, who was born in Languedoc in 1684, and died in 1766. He was the principal advocate of the view that syphilis had an American origin, in which view he was bitterly opposed by Sanchez, a

Portuguese physician, who collected a large amount of evidence to the effect that its first ravages were observed in Italy.

Summing up this whole matter, we may agree with Jourdan, who has examined all the opinions of these writers, and who in his treatise published in 1826 concluded that all symptoms which had been hitherto connected with syphilis had been known and described from the remotest antiquity, but were not supposed to proceed from a common source and to be attached to the same cause until after the close of the fifteenth century.

THE INFLUENCE OF THE OCCULT SCIENCES ON THE MEDICINE OF THIS PERIOD.

Most of the partisans of occult science were restless minds such as are found in all ages, who chafed under the yoke of authority, and who practiced as well as deduced their lines of thought and conduct in accordance with their own ideas. Some of these men did not lack in sagacity, imagination, or audacity, but almost all of them lacked in consistency of idea and dignity of thought. Most of them lived isolated lives, apart from each other and from the rest of the world, and were to a large extent what we would now regard as "cranks." While they made a wide departure from accredited doctrine, they depended upon imagination rather than upon reason. This happened to be a period, however, when such men achieved great notoriety—more so than the same class of individuals have done since their time.

Cornelius Agrippa (born in 1486) was the first promoter of occult science. He came of a noble family of Cologne, received the best education of his time, was a man of varied attainments, great inconsistency in conduct, and a caustic humor which everywhere made him enemies and prevented him from having any settled abode. He wandered from place to place, sometimes honored with the favor of the nobility, and sometimes plunged into extreme misery. He early became a secretary in the court of Emperor Maximilian I., and under that monarch distinguished himself in the army by such bravery as to win his spurs as a knight. Soon disgusted with the profession of arms, he devoted himself to law and medicine, but his intemperate pen soon drew him into quarrels and persecution. At Dole he fell out with the monks; at Paris and Turin he compromised himself with the theologians; at Metz he incurred the animosity of the Jacobins for attacking the prevailing opinion that St. Ann had three husbands. He became a vagabond and almost a beggar in Germany, England, and Switzerland, and then went to Lyons, where the mother of Francis I., who was then Queen Regent, made him her physician. He soon lost favor here, and was disgraced and banished; then he went to the Low Countries, where he was imprisoned on account of his treatise on "The Vanity of the Sciences." Afterward he returned to Lyons, was imprisoned anew for an old libel against his former patron, and finally died in the hospital of Grenoble in 1535 at the age of about 50. His treatise on "The Vanity of the Sciences" made him most trouble and showed best both his bitterness of spirit and the extent of his learning. Herein he laid down the paradox, which was later renewed and sustained by Rousseau, that there is nothing more pernicious and injurious to common life, or more pestilential to the salvation of souls, than the arts and sciences. He founded this thesis on Scriptural authority and supported it by profane testimony.

The conclusions which Agrippa drew were not so strange to the eyes of his contemporaries as they are to ours. Long before him, men of character and attainments, such as Pic de la Mirandola and Bessarion, had attempted to introduce the Platonic idea, that the best means of acquiring science and truth were introspective. They were, moreover, persuaded that a great number of phenomena and events have their origin in astral influences. From this system to the extravagance of the Cabal* is but a step; indeed

**Cabal or Kabbalah:* A theosophical or mystic speculative system of Hebrew origin, which flourished from the tenth to the sixteenth century. It included a mystic theosophy and cosmogony, attributing to deity neither will, desire, nor action, but teaching that from it emanated wisdom, grace, intellect, power, beauty, firmness, and other attributes. It also ascribed hidden meanings to the sacred Hebrew writings and words. Even in the letters and forms of the sacred words the followers of the Cabal pretended to find wonderful and hidden meanings; hence the modern expression "*cabalistic*." The teachings of the Cabal were esoteric, of course, and inculcated mysticism and occultism in everything, but appear to have been more or less influenced by Neoplatonism.

the Christian doctrine that events and phenomena are influenced by the direct intervention of the deity or of the devil, is but a small transposition. The Cabalistic theory, summed up, was that all the events of life and all the phenomena of nature proceed from influences which gods, devils, or the stars exercised on the "archetype"—that is, on the essential spirit or substance. He who could withdraw his spirit possessed supernatural faculties. The day and the hour of birth, according to this view, were under the domination of particular stars, and each of the principal members of the body was supposed to correspond with some planet or constellation. This is the fundamental idea underlying the pictures—which are still to be found on almanacs used by quack-medicine firms—of the individual whose interior is so completely and uncomfortably exposed, while around him are arranged the signs of the zodiac with indications as to which part of the body is governed by each.

Occult Philosophy, built upon this foundation, was divided into four branches: *Theosophy*, to which a man raised himself by prayer; *Magic*, or the art of controlling demons; *Astrology*, or the art of reading future events by the stars; and *Alchemy*, which teaches the secret of extracting the essence or the archetype of substances, *i. e.* virtually the secret of the philosopher's stone, by which metals were to be transmuted and then abolished.

And so the errors of science, the prejudices of the superstitious, the excitement of the religious, and the cupidity of the rich and powerful, all concurred to propagate the faults of the Cabal at the close of the Middle Ages. Never were there seen so many sorcerers, astrologists, and alchemists; never were prophecies, visions and prodigies so common. Whatever happened, it was pretended that it had been announced by some previous sign, or that it was a revelation of the future. This particular kind of folly persisted in Germany longer than in any other part of the world. Even Martin Luther seemed to share many of the cabalistic views, and his alleged struggle with the devil, his adventure with the inkstand, and so on, contributed much to spread them, and were perhaps the most prominent illustrations of their general acceptance. Surely these *were* the Dark Ages.

Jerome Cardan was born at Pavia in 1501. His life, like that of Agrippa, was one of vicissitude and inconsistency. Being the idol of his mother and the detestation of his father produced a peculiar effect upon his character. When he began to study he made rapid progress, and at the age of 22 was able to discuss publicly all questions. About two years later he received his doctor's hat. He practiced medicine in various places until he was 33, and was then made professor of mathematics at Milan. He occupied this position but two years, then traveled in Germany, France, and England, and returning to Italy was imprisoned for debt in Bologna, and finally obtained a pension from the Pope in Rome, where he died in 1556. He was a man of great attainments and sagacity; his literary style was dignified, and if he had not developed such a taste for the marvellous, such inconceivable credulity and superstition, and such vanity and boasting, he would have been a remarkable character in his age. Leibnitz said of him; "Notwithstanding his faults, Cardan was a great man and, without his defects, would have been incomparable." He wrote extensively on philosophy, mathematics, and medicine. Sometimes he admitted to his writings the most absurd statements of visions, etc., and again affirmed that he had never devoted himself to cabalistic art, blamed those who practiced it, and jeered at those who believed in it. He wrote extensively on chiromancy. For his own follies and misfortunes he apologized, attributing them all to influences of the stars.

The most colossal figure in this collection of mediæval charlatans and knaves was Paracelsus. He was born in 1493, near Zurich, of a well-to-do family, his father being a physician. He had a good preliminary education, and then visited the various universities, or rather university towns; but instead of listening to the professors, Paracelsus associated with clever women, barbers, magicians, alchemists, and the like, from whom he acquired much information. He was led at once to the vagaries of the Cabal, and, according to his own statement, did not open a book for ten years. He neglected his studies and forgot his Latin, so that he became inca-

pable of expressing himself in that language. From the age of 25 he became a hard drinker, and this habit ultimately worked his ruin. One of his disciples says of him that during the two years which he passed with him he was so inclined to drinking and debauchery that he could scarcely be seen for an hour or two without being full of wine, although that condition did not prevent him from being admired by every one as a second Æsculapius.

At this time Paracelsus was between 33 and 35 years of age, and at apparently the most brilliant period of his life. He had written extensively and with emphasis of his numerous cures, after the fashion of charlatans of those days—and, unfortunately, of to-day,—and claimed to be possessed of infallible secrets against the most intractable diseases. He had just been called to Basle to the chair of physic and surgery, and crowds of curious and idle persons attended his lectures, which he gave in the vernacular, and not, as was customary in those days, in Latin. In order to strike his auditors with astonishment, he began by burning the works of Galen and Avicenna, and then reading from his own writings, breaking off from time to time into the statement: "Know, ye doctors, that my hat knows more than you; that my beard is more experienced than your academies. Greeks, Latins, Arabians, French, Italians, Jews, Christians, and Mohammedans, you must follow me; I shall not follow you, for I am your monarch, and sovereignty belongs to me." As may be imagined, his professorship was not one of long duration, and he soon had few or no listeners. In consequence of some mishaps he left Basle quite precipitately, his departure causing no such sensation as his arrival. He then resumed his nomadic life, and we find him at Alsace in 1528, at Nuremberg in 1529, at St. Galle in 1531, at Mindelheim in 1540, and the following year at Salzburg, where he died in the hospital at the age of 48.

Few men there are of whom so much good and so much evil has been written as of Paracelsus. Few are there of whom it is to-day so hard to judge, since if we refer to his contemporaries they disagreed completely concerning him, and if we refer to his own writings we fall into still greater chaos and have to abandon the attempt. His writings show ideas without connection, observations which contradict each other, and phrases which defy comprehension. At one moment he gives proof of admirable penetration, at the next simply abject nonsense.

That he exerted an influence upon his time is certain, but that this influence was retrograde rather than progressive seems quite likely. His exact duplicate has probably never existed since his time, and we may say that never was there another man like Aurelius Phillippus Theophrastus Paracelsus Bombastus ab Hohenheim—his full name.

Although this man was such a prominent character in his day, his name must be erased from the list of those who have contributed to the world's progress. He was simply a pretended reformer who counted as nothing the most erudite writings, and who relied solely on his own experience. He had the most profound self-confidence, and played upon the credulity of his neighbors and victims with the toys which were furnished him by the prevalent cabalistic notions of the day. The school which he would have founded was nothing but a school of ignorance, dissipation, and boasting—a school of medical dishonesty. In a word, it was, as Renouard has said, "a school of which Thessalus of Tralles had been the Corypheus in antiquity, which John of Gaddesden revived in the Middle Ages, and to which Paracelsus gave a new development."

While, as has been briefly recounted, the partisans of the occult sciences strove to completely overturn the scientific edifice of antiquity, other reformers more sensible and less daring were content to expose its defects without attacking it in its entirety. These were for the most part enlightened men and at the same time free thinkers, friends of progress and not of destruction. During the sixteenth century these men were few in number, but at least three or four of them deserve mention.

John Argentier was born in Piedmont, and taught in Naples, Pisa, and Turin. He did not hesitate to take issue with the theories and statements of Galen, and criticised those who adopted them too servilely. Of him it may be said that, although styled a reformer,

nevertheless he kept too near to the doctrines of those against whom he inveighed to seriously weaken their position.

Leonard Botal, also a Piedmontese, was born in 1530. First a surgeon in the French army, he later became physician to the kings Charles IX. and Henri III. He was the first to recommend frequent and general blood-letting. Apparently before his time this practice was greatly restrained. He carried his views so far as to maintain that an infirm old man should be bled from two to six times a year, and that it was good custom to open the veins of healthy individuals every six months. He wrote a remarkable memoir on the cure of disease by blood-letting. It is not to be denied that he obtained some remarkable success with his copious venesections, and it must be said in his defense that if he overdid it his contemporaries did not resort to it often enough, and that his own practices were instructive to others. In his writings he united independence and energy of thought with elegance and purity of style.

Joubert (1529–83) was chancellor in the University of Montpellier and physician to King Henri III. He wrote a treatise on "Popular Errors," which had an unheard-of success. In less than six months there were sold nearly five thousand copies, which, considering the times, constituted a prodigious edition. For one thing, it was written in the common tongue, and so placed within the reach of all. It was also diversified with anecdotes and jokes, some of which were not of the most delicate character; in fact, the author endeavored to atone for some of its salacity by dedicating it to Queen Marguerite. He really proposed for his main purpose a serious and useful one, namely, that of combating prejudices which were both injurious and ridiculous. Although we may make light of Joubert's treatise, it certainly achieved a useful end by dissipating a multitude of errors, giving information to those who could scarcely get it as well from any other source. That it was full of defects is simply another form of saying that it was published in the middle of the sixteenth century.

It was during this period of which we have written that the separation of the priesthood from medicine was completed. From the sixteenth century celibacy was not obligatory on physicians in the kingdom of France, and they no longer enjoyed ecclesiastical benefices. At this time, too, surgery, which had naturally been separated from medicine, began to approach it, the combination thus gradually brought about inuring to the benefit of all concerned. From now on, the professors of St. Come were on the same level as the professors of the university, and enjoyed equal privileges. Institutions for instruction in medicine increased, and those which already existed were developed. Amphitheatres for dissection were open in every city in Europe. Hospitals and dispensaries were established alongside the schools, and by the various governments more attention was paid to the protection of the public from imposition and to the amelioration of every evil affecting either public or private health.

(*To be continued.*)

CO-OPERATIVE MEDICINE, OR LODGE PRACTICE.*

BY DOCTOR JAMES SAMSON.

This paper is simply a few plain, cold-blooded observations in reference to a malignant pustule that has during the present generation planted itself on the body of the medical profession, with results such as always follow the history of malignancy.

The medical profession has long enjoyed the dignity of standing in the very forefront of respectability among the educational or ganizations of the world; and it has, we all believe, honestly deserved this recognition—*first*, from the high standard of its attainments; *second*, from the tremendous interests involved in its pursuits; and *lastly*, from the fidelity and honorable energy with which its disciples have in all modern days dedicated their best energies to the duties of their chosen vocation. And all of this dignity has been but an accumulation of the individual worth of the members of the profession. That this condition of affairs shall always continue, is a "consummation devoutly to be wished," both for ourselves and in the interests of those whose destinies are largely in our hands. So literally is this true, that no wiser injunction could be impressed

* Read before the Windsor (Ontario) Medical Association.

on him who passes through the portals of admission to the profession than to remember that his dignity and self-respect will win him half the power and usefulness he shall ever possess, and that the great public to whom he goes will ever respect him most who most respects himself. And so I believe that he who peddles his profession prostitutes it, and pays for his crime the inevitable price that prostitution has always paid, both in his own personal humiliation and in the degradation that his debauchery brings on the craft which he represents.

It was no honorable motive that first inspired the damnable heresy of coöperative medicine, nor has any one ever claimed that it was even a humane impulse that fathered this ill-begotten innovation. Almost every so-called benevolent organization known among the sons of men in our day had a bastard birth, and under the hypocritical guise of Christian charity was chartered and founded to fill some man's pockets or the measure of his ambition. And as all men in their average daily conduct seem so prone to value their money more than their lives, the audacious scheme was concocted of offering them the bonus of gratuitous medical attendance as a special inducement among all the others. And so the profession that has always done and always will do, to the very verge of eternity, more for charity's sake than all others, was asked to add a halo of respectability to this scheme of modern philanthropy, to accept all men as paupers, to care for them in sickness and distress at the ordinary rate paid by all other corporations for all other paupers — a rate which, by the way, has always been considerably less than the average horse-breeder would gladly pay a veterinary surgeon for the care of as many average horses.

And so doctors in hundreds and thousands, with a strange fascination for that which promises money on the spot, have taken the thirty pieces of silver and made themselves part and parcel of the scheme. Some enlisted because poverty suggested the crime, some because of the promise of a possible inroad into homes to which they might otherwise for a long time and perhaps forever remain strangers. Artifice was thus employed as an accession to brains. Some enlisted from an easy-going thoughtlessness as to the "true inwardness" and inevitable tendency of the ill-shapen scheme, and some from that wasted love of charity that so strangely seems to flourish in some doctors in proportion as they themselves grow hungrier. Charity forsooth! —a charity unique in that it curses both him that gives and him that receives.

And so it goes on, and the man who possesses houses and lands and stocks in the bank, and a mortgage on the physician's home, can command his services and claim his professional bondage for a year, for the same money he would pay a dog-healer for the inspection of a hound with the mange. And the hireling going from door to door gathering mites from the rich and the poor, no greater often than the umbrella-mender gets, and with more feeling of contempt for himself than his fellow-practitioners have for him, slowly and quietly ousts the old family physician out of the home and little by little makes of him an enemy. Or he sees the sick man recover, and himself dismissed with as little ceremony as a beggar, and the day after sees another carriage at the door and another doctor caring for the family, and his own humiliation increased. Or he finds that the man who pays like a pauper commands like a king, and wants as much attention paid to a carbuncle as would be given to a garrison poisoned with cholera. And he comes, and he comes again and again, and goes into the house half-sneaking, and comes out of it cursing the contract that gave him a pittance to put himself under obligations and be a slave to an unreasonable hog. And then he himself is sick of it all, and knows as he lives that there is no enjoyment or satisfaction and but little present or prospective profit in it, that there never was one righteous reason why he should have enlisted in the work, and that the entire system is a crime against the dignity and harmony and prosperity of the profession. And when the patient is really sick, and growing sicker every hour, the prospect of a consultation with the family physician convinces him that here is a situation which no schedule of lodge fees ever yet fully provided for. And when the grass is green over the grave of his patient, and the widow and the heirs and administrators of the deceased have closed out the whole

edition of their versions of the cause of death, and the annual meeting of the lodge has come around again and a "put up" vote has put another physician in charge, it is then that he (the doctor I have been writing of) goes to his home in the dark and swears that Scugog Lodge No. 784 will see his face no more forever—he swears it alone, where none may hear and wonder whether his motives were manly or mercenary when he first stood at the door of Scugog 784 praying so earnestly for admission to all its rites and ceremonies.

I need not linger long on the moral of it all. That man is now, and ever was and ever will be, the best member of any profession, who himself most highly esteems his membership. The physician who has learned to place a low estimate on the value of his services will learn sooner or later that no one else's estimate is higher than his own. Charity should be charity, pure and simple and undefiled, and all else should be business and business only. His most steadfast and abiding friends will be those whom he has won by the most dignified, most manly, and most skillful display of his real worth; and his own individual pride in his profession, and his personal standing among his fellows, will some day appear to him as they really are, *matters of intense importance.*

Windsor, Ontario.

HICCOUGH.

This is often a most distressing symptom, and in rare instances becomes, when prolonged, threatening and even dangerous.

In a recent number of *Vratch*, Tatevosoff calls attention to common tobacco-snuff as a remedy. He narrates the case of a patient suffering from chronic chest-disease, accompanied by violent attacks of cough, invariably succeeded by paroxysms of most obstinate hiccough. After a time the singultus refused to yield to any of the classic remedies—even cocaine was powerless. Then tobacco-snuff was employed in successive pinches until lively sneezing was induced. The result was most satisfactory, for with the first sternutation the singultus disappeared, to return no more.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., MARCH 11th, 1895.

Editorial.

SERPENT POISON AND POISONING.

The action of serpent venom when introduced into the circulation is exceedingly swift. First occurs an intense burning pain in the part lacerated, succeeded by nausea, retching, coldness, vomiting, numbness, faintness, and collapse; the surrounding parts are discolored by livid blotches as the result of extensive blood-disorganization—not by coagulation, as is generally surmised, for the blood is now deprived of its fibrin, the principle upon which coagulation depends,—dissolving, attenuating, and altering the form of the red corpuscles, the integrity of which is life; causing them to adhere one to another and to the walls of their conduits. Second, the poison is conveyed to the brain, overloading its capillaries, inducing paralysis of those organs that derive power from the great nerve-centres. It is not to be supposed, however, that all or even a major portion of the blood-disks require to be decomposed to ensure fatality, since death commonly supervenes long before such consummation can be realized. It is the capillary circulation that suffers most, the very size and calibre of the trunk vessels affording them comparative immunity. The agglutination of disintegrated and decomposed blood-corpuscles, impeding circulation, produces the peculiar livid blush with its attendant swelling, a similar condition being induced also within the brain and spinal cord.

Heart failure, and paralysis of the muscles of respiration through reflex influence of the par-vagus and great sympathetic nerves, are

among the earliest phenomena, and afford indubitable evidence of brain pressure; breathing is thereby retarded and made laborious, and pulmonary circulation impeded. The blood sent from the heart to the lungs fails to receive the supply of oxygen necessary to its decarbonization, hence is returned charged with effete products. The brain, already gorged with venom, is doubly poisoned by the superadded uneliminated carbon, and gives rise to a train of symptoms that, commencing with drowsiness, pass into stupor that gradually becomes more and more profound, terminating in dissolution.

Though so frequently attended with dire results, wounds inflicted by venomous reptiles are not invariably fatal—hence the many "positive cures." There are seasons and periods when all such creatures are comparatively innocuous. The venom may have been diluted or exhausted by repeated attempts to obtain food; it may have been extruded ere the fangs were buried in the flesh, or absorbed by the clothing during passage through it. Woolens are efficient safeguards, and the fang-teeth, so fragile in their connection with the jaw, are frequently torn out by becoming fixed in the cloth. Again, some individuals are more susceptible than others, owing to varied causes, and a few possess temporary or permanent immunity that may be either natural or acquired. Recovery from one or more inoculations wherein all the virulence of the species has been manifested is popularly believed to afford ample safeguard against the poison in the future: this, however, is a somewhat mooted question.

To seek a specific for poisons of this class is as irrational as the pursuit of the "philosopher's stone." Nostrums innumerable have been vaunted and widely heralded, only to be relegated to oblivion; and it is difficult to name any substance so inert or so filthily nauseous that it has not had its praises as an antidote sung at one time or another. "One swallow does not make a summer," and the history of the world affords ample evidence that coincidences are far more frequent than demonstrations.

Serpent venom is instantaneous in its action and swift to accomplish all its deadly work, consequently cannot be overtaken and overcome by any ordinary remedy, even though the latter be introduced directly into the circulation—much less when administered by the stomach, when from twenty to thirty minutes are required for absorption. Ere it can reach the blood-corpuscles and nerve centres, both are beyond all aid save such as may be afforded through eliminative and recuperative processes of Nature. An antidote, moreover, presupposes a substance that will restore the form, functions and energies of the red corpuscles; which would place man in the possession of one of the greatest attributes of his Creator—the power to produce life anew!

Iodine and its preparations, and potassium permanganate, constitute the nearest approach to specifics that, without encroaching upon the divine and supernatural, can be looked for; thrown into the wound and circulation, they have the power to arrest decomposition and favor adhesive inflammation, whereby lymph is effused and coagulated, retarding absorption. Other measures available are:

Prompt cutting-off of circulation in the part affected:

Removal of unabsorbed venom from the wound by the lips or cupping-glass:

Direct mechanical stimulation of heart and lung action, sustaining life until Nature shall have had opportunity to eliminate the poison, which may occur through any or all excretory functions—fortunately the economy is provided with innumerable sentinels (absorbents) ever on the alert to seize upon effete and noxious products and place them in the way of elimination.

So long as heart and lungs act, death is impossible. Alcoholic and other diffusible stimulants, digitalis, strychnine, etc., are of value only as they act mechanically in sustaining and supporting fleeting circulation and respiration; they in no way modify the action or virulence of the poison; and an intoxicated person, far from enjoying the immunity popularly imagined, succumbs more readily than one in full possession of his faculties.

A physician well known to the writer, while a resident of Jubalpore (Central India) preserved the lives of numerous Hindus by prompt resort to mechanical stimulation of

heart and respiration. On one occasion a *syce* (horse-keeper) in his employ was bitten by a cobra of unusual size and virulence. Though the man was more than half-stupid, delirious, and already looked upon as dead by relatives and friends, his hands were bound to the back of the doctor's gig and he was forced to keep up with the pace of the horse (some eight or nine miles an hour) through a circuit of thirty miles. When released, though bathed from head to foot in profuse perspiration, and half-killed with fatigue, all evidences of his misfortune had vanished.

The value of copious cutaneous transpiration, securing an eliminating channel for the rapid discharge of poison, is well understood by physiologists, and cannot be too highly extolled; in no other way can action be had so thorough and prompt.

The native populations of the Orient, in spite of widely prevailing opinions to the contrary, are remarkably free from resort to nostrums, which appear to be the especial prerogative of so-called "advanced civilization." Knowing the prompt relief to be obtained thereby—though with no understanding of the physiological phenomena involved—the person bitten is seized by his friends, and constant and vigorous exercise is enforced, even at point of stick; and seemingly cruel beatings are often necessitated.

Jugglers, too, far from exhibiting serpents that have been rendered innocuous by removal of fangs, seldom employ any but well developed, markedly virile reptiles, the cobra being the general favorite because of an affectionate, tractable disposition, with no tendency to avail itself of its terrible weapon, save only when frightened or enraged; the manipulation, however, is always prompt, certain, and adroit. Accidents do sometimes happen, the remedy for which is instant amputation of the wounded part, by means of a sharp, broad-bladed knife, which every serpent-charmer is provided with, and that is carried hidden beneath his girdle.

MASTURBATION AND THE SCHOOLS.

Over thirty years ago, when Hermann Cohn came forward with the emphatic statement that the schools were ruining the eyes of the pupils, he was charged with exaggeration. Not until after the lapse of a long period, and the publication of a large number of corroborative reports by other authors, were his hygienic propositions accepted and conformed to in the erection of school buildings.

He chose for the subject of his latest address at the Budapest Congress one of the greatest of the evils that beset school children, viz., masturbation.

Neither the diseases of society nor those of the individual can be prevented or cured until they are openly discussed, and this is the fundamental principle announced by Cohn, who handles his theme in a very lucid and comprehensive manner. He discusses the symptoms and consequences of the evil, the question whether it is more injurious than coitus, its favoring causes in the schools, and, finally, the possibilities of prevention.

Masturbation is so widespread among the youthful that neurologists have been led to declare there is not a single living male who has not at some time or another sinned in this respect. Cohn's observations are corroborated by Fürbringer, Curschmann, Moll, Fleischmann, Lindner, Kempe, Jacoby, and others. It is known that even in nurslings onanistic movements may be observed, followed by a stage of excitation similar to orgasm. In children over nine months of age onanism is quite frequent; and later on, boarding-schools, military academies and similar institutions become propagators of the vice. Among the accruing consequences may be enumerated neurasthenia, functional sexual derangement, psychic sexual disease, and eye-maladies.

With respect to the evil consequences of this habit as compared with those resulting from coitus, Cohn reaches the conclusion that moderate masturbation in persons of sexual maturity is, as a rule, no more injurious than a like degree of sexual intercourse; if, however, onanism is begun at an early age and practiced daily for years, lasting injury may be, and usually is, inflicted on the physical and mental powers—injury which fluctuates in severity according to the constitution and resistant vitality of the individual.

It is an error to suppose that youthful onanists cannot be singled out. The habit

is betrayed in such by their embarrassed manners, dreamy reveries while at work, inferiority of mental powers, or the singular fluctuations in their capacity for mental application.

The schools, especially, present many predisposing causes for the development of this vice—in the sedentary tasks which provoke an undue congestion of the genitals; in the long intervals of sitting with crossed legs; in the climbing of poles, ropes, etc.; in visits to places of ill-resort; and in the secret dissemination of erotic literature and pictures. The practical abandonment of the recess interval in many schools of the United States is also a potent factor, since it inhibits an amount of desirable relaxation and healthy exercise.

With respect to preventive measures, it is suggested:

That during instruction, as well as in the intervals, the teacher make it his business to see that masturbation is not practiced reciprocally between pupils:

The teacher is also in duty bound to apprise the pupils of the danger of both self-masturbation and mutual onanism:

Also, through lectures and printed matter, the parents and guardians should be admonished to fulfill their duty by warning their children of the dangers of onanism.—The question of immunity from punishment of all informers, as suggested by Cohn, is a problem to be considered.

The need of alertness on the part of the teacher is patent, but it is not recommended that culprits when discovered be exposed in open class and lectured regarding the dangers of the vice; this is a matter that should be settled entirely in private, the offender being made to realize the disgraceful character of his habit. The teacher may then, if it seems desirable, communicate with the parents.

Much of the vice is traceable directly to the absurd manner in which infants of tender age are swathed, the genitals being heated and irritated by an excess of clothing. Sore vulvæ, due to filth, may also act as a cause, to say nothing of the turpitude and willful misconduct of certain nurses. Lindner may be carrying matters too far when he asserts that the sucking of the fingers is a symptom of masturbation, but it must be conceded that onanism is to be frequently observed in children possessing this habit, and long before they begin to attend school. The most effective measures for prevention, therefore, must be executed not so much at school as in the home and during early infancy. When onanists enter school they, of course, continue their practice, but a guilty consciousness of evil prompts them to conceal the vice from parents and attendants at home and from associates elsewhere.

The entire problem is one of great importance, and Cohn has had the courage to discuss the evil with perfect freedom. It certainly behooves all entrusted with the care and rearing of children to use every means of limiting and preventing this demoralizing and dangerous habit; and here knowledge of the simplest physiological, dietetic and hygienic laws is of paramount importance on the part of parents, guardians, and teachers, that they may impart the same to the children. Above all, steps should be taken in every community to repress the objectionable cheap literature that so generally obtains, most of which, if not entitled to designation as pornographic, certainly stimulates and disseminates lewd ideas.

EDITORIAL NOTES.

Syphilis Among the Innuits.—

It has frequently been stated by Arctic explorers that the aborigines of the more northern portions of the American Continent are entirely free from venereal disease—a condition that has never been true of the same portion of the opposite hemisphere. A Danish medical journal recently stated syphilis has not been observed in Greenland for upwards of a hundred and fifty years, although frequently taken thither by sailors; but since 1872 it appeared among the villagers of Foighet and Arsuk. However, it would seem that northern climes are inimical to the spread of the malady, since the fifty cases in Greenland in 1872 had narrowed down in 1889 to only ten, and even these were of most benign character. Though the disease is common to the tribes of Northern Siberia and Russia, it seems to be possessed of little virulence.

Hysteria and Wedlock.—

It is a belief as old as Hippocrates that hysteria is cured by marriage.

Our own experience is, that latent and unsuspected hysteria often first asserts itself after consummation of the nuptial state, and that ignorance of sexual laws, and consequent sexual abuse, tend to induce not only hysteria but other neuroses. Doctor W. Cook, who has been investigating, corroborates that "most cases of dysmenorrhœa and hysteria among single women are aggravated by marriage."

Digitalis in Pneumonia.—

Doctor Foster, in an address before the Pennsylvania State Medical Society, insists that recoveries from pneumonia will and do occur in greater numbers when the malady is treated by large and persistent doses of Digitalis. In conjunction with strychnine given in physiological doses, normal liquid Digitalis is administered until the pulse comes down to ninety per minute. If it can be kept there, recovery will ensue in a shorter time than by any other method of treatment.

Pessimistic.—

The *Western Doctor*, announcing that a new homœopathic journal has entered the field, adds: "It will die. Medical journals are going to have 'hard times' during the next two years, and many will go to the wall; and deservedly."

This prophecy, however, does not seem to have had any dispiriting effect; since it was made, four more new journals have announced themselves, and one aims to be a daily.

Corneal Abscess.—

Hansel recommends treatment by instillation of a solution of Physostigmine sulphate, one grain to the ounce. He declares that in several instances, after the usual remedies, such as atropine, hot water, and tonics, had been employed without benefit, improvement began within twenty-four hours after the instillation of the Physostigmine, and continued to prompt healing; no other change was made in the treatment.

Suggestive.—

Of the thirty-seven recent applicants for positions as assistant surgeons in the United States Army, but five were found qualified; of thirty applicants for like positions in the United States Navy, only three were found qualified.

It would appear as if there was something radically wrong in the system of education carried on in the majority of colleges, when barely sixteen per cent. of the graduates are capable of meeting the demands for military and naval service.

Cremation.—

This is certainly the coming method of disposing of the dead. In a few years it will have largely displaced the present burial system. It is cleanly, economical, and devoid of all the objectionable features that pertain to inhumation. This being admitted, why should it not in all cities and larger towns replace the scandalous and dreary waste that attaches to every cemetery under the guise of "potters' field"?

Time to Begin Weeding Out.—

Doctor W. B. Mead, of Oberlin, Kansas, expresses the opinion, in a recent number of the *Medical Brief*, that the time for a "civil service reform" in medicine has arrived; that only the fittest can survive. He justly adds that in the future only men who have received an academic or classical education should be allowed to present themselves as students of medicine.

Remedies that Cure.—

This is the very pleasing title of a book recently published in France. We are of the opinion, however, that the somewhat portly volume that would result from an attempt to describe the remedies that *do not* cure would be of much greater therapeutic value.

Palatability and Dosage.—

Gelatin capsules afford an absolute means of securing palatable dosage. The smaller are readily taken by the youngest children, and their advantages in administering quinine and nauseous drugs cannot be overestimated.

Infant Foods.—

Doctor Davis, of the Polyclinic Hospital, New York, declares the worst cases of malnutrition in infants he has ever encountered were those in which the children were fed permanently on condensed milk.

Items and News.

Kisses and Their Classification.*—

A LOVER TO HIS LASS.

He.—Take, oh! take those lips away!
Not but what I want to kiss them,
Not but what, believe me, pray,
I most certainly shall miss them.
Heretofore, you know I've joyed
In our frequent lip-communion;
Never yet have I been cloyed
With the sweets of labial union;
'Tis on other grounds I say,
"Take, oh! take those lips away!"

My decision is no whim,
Due, my love, to fit of vapors:
'Tis the consequence most grim
Of perusing doctors' papers.
For these journals now declare,
With malign persistence, Beryl,
That each kiss in which we share
Reeks (excuse the word) with peril.
That is why I'm forced to say,
"Take, oh! take those lips away!"

Ah, our lips, we used to vow
Were a hiding-place for Cupid;
Doctors, though, inform us now
Our belief was worse than stupid;
Microbes lurk, so they assert,
In those highly favored regions;
Germs infectious, to our hurt,
Sally thence in countless legions.
Own, then, there's some cause to say,
"Take, oh! take those lips away!"

For myself I'd run the risks,
I would face with greatest pleasure
Millions of atomic disks
For the love of you, my treasure;
But I feel concerned for *you*—
Such concern I cannot mask it—
And that you should face them too—
No! I cannot, dare not, ask it.
So, again, I sadly say,
"Take, oh! take those lips away!"

She.—Try not thus to me dissuade,
For in vain is your endeavor.
What, shall I shrink back afraid,
When my Edwin dares? No, never!
Darling, you know well our case;
Love has bound us in one tether
So, if there be risks to face,
We will face them both together.
As you love me, then, don't say,
"Take, oh! take those lips away."

He and She.—We will never be coerced
By the bullying bacillus.
Doctors, though they say their worst
With dismay will never fill us.
Let us, therefore, both of us,
Their last raven-croak dismissing,
Show that *thus*—and *thus*—and *thus!*
We still mean to go on kissing.
Neither of us means to say,
"Take, oh! take those lips away!"

* This amusing poem recently appeared in London *Truth*.—ED.

Calomel in Veterinary Practice.—

According to the *Meyer Brothers Druggist*, "Stock Calomel" is the name applied to a commercial commodity of questionable composition, the sale of which seems to be confined chiefly to Texas, where the article is employed in the treatment of wounds on cattle. The article is evidently the outgrowth of the demand for a large quantity in return for a little amount of money, without regard to quality. While pure calomel is required for human beings, there is a feeling that almost anything will do for dumb animals. [This too frequently is the view of the veterinary practitioner.—ED.] An investigation reveals the fact that under the name of "stock calomel" the following mixtures are sold at prices in accordance with the composition: Calomel one part, white lead three parts: Calomel one part, white lead seven parts: Calomel one part, flaxseed meal one part: Calomel three parts, white lead two parts: Calomel one part, sugar one part.

This vividly brings to mind the fact that a number of years ago "horse antimony" was the only black sulphuret of antimony procurable in bulk in the Chicago drug market, and the "antimony" in this was represented by ground anthracite and mica.—*Medical Standard.*

A Strange Disease in Dublin.—

A number of the inmates of the Richmond Insane Asylum at Dublin have been attacked with a disease resembling beri-beri in many of its features. The symptoms are a general œdema, beginning in the legs and spreading thence to the whole body, followed by peripheral neuritis and paralysis. There is no fever, and albumen has been found in the urine in a few cases only. The heart is weak, and dyspnœa is complained of. After a while the œdema diminishes and signs of neuritis appear; then ataxic symptoms set in, with loss of the patellar reflex and muscular atrophy of the extremities. Post-mortem examination has shown hydropericarditis, œdema of the lungs, ascites, and fatty degeneration of heart and kidneys. Over a hundred have been attacked with the malady. —*Medical Record.*

An Inconsistency.—

If specific bacteria can live peacefully in normal secretions, without producing the pathology with which they have been so intimately associated in the minds of their discoverers, they are in no sense pathogenic. Why? Because it is claimed that they, through their life processes, produce toxins, which, in turn, cause disease. But these life processes

go on continuously in normal secretions, and yet produce no bad symptoms.

The only satisfactory explanation of this inconsistency is, that bacteria simply feed upon the organic débris found in greater or less degree in all secretions, and do not invade the tissues until necrosis sets in.—*Medical Brief.*

Absurd Legislation.—

The *Journal of the American Medical Association*, in speaking of the annual meeting of the Pennsylvania State Dairymen, clearly shows the absurdity of the legislation against oleomargarine. The editor of the Meadville *Messenger*, Mr. A. J. Palm, obtained three packages of "imitation butter," which he exhibited as butter and gave the names of three of his dairyman friends as exhibitors. As a result of this trick, the one-pound package of imitation received second premium, and a third premium was awarded on the five-pound package, which scored one point higher than the best dairy butter in one-pound packages —*Maryland Medical Journal.*

Gonorrhœa and Old Age.—

Gonorrhœa is generally considered a disease of youth or middle life, and there would appear to be the best of reasons why the old age of man should be exempt from it. But here comes an account from New York of a case in a man 103 years old. The disease was decidedly acute, and, although particulars are not given, there is every reason to believe it was acquired in the usual way. As many cases of this disease have lately been reported in children of tender years, and even in infants, it is evidently futile to try to set an age limit for it.—*Northwestern Lancet.*

To Make Steel Instruments Bright as New.—

Clean by rubbing with wood ashes and soft water. Then soak in a weak solution of hydrochloric acid in water (about ten to fifteen drops to the fluidounce) for a few hours, to remove the remaining rust and grease. Wash well in pure soft water, and place in a bath consisting of a *saturated* solution of tin chloride, letting them remain there ten to twenty-four hours, according to the coating desired. When removed from the bath, wash clean in pure water, and dry well. When the job is well done, the steel will appear as if nickel-plated.—*New York Medical Times.*

The Evil of Proprietary Medicines.—

Especially reprehensible is a habit which threatens to become more and more general —I mean prescribing proprietary medicines, particularly those that contain narcotics. By doing so the physician not only jeopards the physical and moral future of his patients who buy these vile compounds indefinitely, thinking they have struck the right remedy, but he helps to develop a branch of pharmacal industry which constitutes a crying evil.—Ludwig Bremer, in *Medical Fortnightly.*

Convallaria.—

Doctor Manuel Bustamente highly praises this drug, and likewise its alkaloid, in valvular diseases of the heart with increased venous and diminished arterial tension. He notes, however, that it, and the alkaloid especially, may give rise to hæmoptysis, dyspnœa, and other disagreeable symptoms. He concludes that the drug appears to have a better action than digitalis and caffeine, and frequently succeeds where these fail.—*Deutsche Medizinal Zeitung.*

A Paradise for Superannuated Horses.—

We note from the *British Medical Journal* that the horses which furnish antitoxin supplies suffer no pain from the inoculation, but "are fatter, sleeker, and in better condition in every way than they were at the outset."

It is gratifying to hear this. Truly the diphtheritic poison does not produce this happy result in our patients, but there is a vast difference between a genuine malady and a scientific experiment.

Pulverized Camphor.—

Dissolve camphor in one and a-half parts of alcohol; precipitate by the addition of four parts of water. Collect the precipitate, wash with an abundance of water, and dry. This will not conglomerate. By keeping account of the quantity of camphor used, the quantity left in the diluted alcohol can be calculated, and this solution used for making tincture, etc.—*Der Pharmaceut.*

A Good Move.—

The Iowa Legislature has a bill before it requiring every proprietary medicine to have printed upon its wrapper a statement of the ingredients contained therein. Failure to do so subjects the manufacturer to a fine of $100, or six months in the penitentiary.—*Clinic.*

A somewhat similar bill is pending in the Michigan Legislature.

Phthisis Acquired by Cohabitation.—

Doctor Cardier declares that phthisis acquired in this manner is by no means rare, and that it begins most frequently in the

upper portions of the larynx, the lesion remaining there localized for a considerable period of time. During this period of localization, treatment is very effective.

Pleurisy Root in Pneumonia.—

Doctor Chas. Churd, in the *Medical Century*, declares pneumonia, if seen during the first twenty-four hours of the disease, can almost invariably be aborted by *Asclepias tuberosa*. The editor of the *Century* believes the remedy to be efficient in all stages of the malady.

Mushrooms and Toadstools.—

The *Western Druggist* says, to distinguish these "without eating and waiting for results," peel an onion and put it in with the fungi while they are being cooked. If the onion remains white, you may eat with confidence; if it turns black, there is death in the pot.

Worth Remembering.—

Physicians who dispense their own remedies—and there are few who do not carry a small pocket-case — will find it greatly to their professional advantage to carry a small supply of gelatin capsules in order to enclose the tablets, powders, or pellets they choose to prescribe.—*Exchange.*

The Truth, the Whole Truth, etc.—

Proprietary-Remedy Agent: "Doctor, I suppose you have been using our wonderful remedy; it is a powerful vitalizer; it prevents waste, increases the red corpuscles, and—"

Tired Doctor: "Yes, I know it does increase the *sells*."

Is This True?—

It is reported that Aronson is working with a firm of chemists that are seeking to patent antitoxin; also that Roux and Behring are seeking patents.

It is to be hoped this rumor is without foundation.

Some Do Need It.—

It is an open secret that St. Louis will soon have another medical school for the benefit of practitioners of medicine. This puts us in mind of the surgeon who suggested sterilizing his antiseptics.—*Columbus Medical Journal.*

Editorial Change.—

The *St. Louis Medical and Surgical Journal* has changed editors. Doctor Frank Rumbold, having gone to California, is succeeded by Doctor A. H. Ohmann-Dumesnil.

Book Reviews.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 per year. H. C. Jones, New York.

The March number comes to us replete with good things and in illustrations "a thing of beauty and a joy forever." Elliott Dangerfield indulges in a reminiscence of George Inness; Gertrude Kasebier writes of "Peasant Life in Normandy," Lennie Greenlee of "Leaves from Nature's Yellow Book," George F. Kunz of "Early Artistic Watches," Ernest Ingersoll of "Kivas and Kisis of Tusayan," John Champlain of "Cross and Serpent of Aboriginal American Art," Charles Turner of "Killarney;" George Parsons Lothrop contributes "Monda," a novel. In the illustrations we find the names of no less than forty-three of the most illustrious of the world's artists.

We cordially commend this publication to every individual who is a lover of the beautiful. Nowhere are such excellent illustrations and such a wealth of subjects to be found as in this journal.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

One of the most important projects ever undertaken by this magazine begins in the March number with the first installment of President E. Benjamin Andrews' dramatic narrative, "A History of the Last Quarter-Century in the United States;" W. D. Howells contributes the first of a two part story, entitled "A Circle in the Water." There is a story of life at an army post, by Rhodes Macknight; an amusing installment of George Meredith's great serial "The Amazing Marriage;" and Noah Brooks concludes his survey of American politics with a paper entitled "When Slavery Went Out of Politics." Among the miscellaneous articles are a short and profusely illustrated paper on the arrangement of "Bedding Plants," by Samuel Parsons, Jr.; "Orchestral Conductors and Conducting," by W. F. Apthorp; and some remarkable hitherto unpublished poems by Thoreau.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia

The complete novel in the March issue is "A Tame Surrender," by Captain Charles King. The other stories are "Fulfillment," by Elizabeth Knowlton Carter; "The Luck of the Atkinses,' by Margaret B. Yeates; and "One of the Wanted," by B. B. Two brief scientific articles are: by George J. Varney,

"Electric Locomotives on Steam Roads," and "The Story of the Gravels," by Harvey B. Bashore. "A Glimpse of Cuba" is by James Knapp Reeve; Isabel F. Hapgood writes of "Furs in Russia," and W. D. McCrackan on "A Question of Costume;" Professor William Cranston Lawton discusses "The Artist's Compensations;" Professor H. H. Boyeson furnishes "A Youthful Reminiscence;" and C. W. Lucas, as "Doolittle," writes "An Open Letter" to Mrs. Grundy. The poetry of the number is by Professor Charles G. D. Roberts and Richard Burton.

LITTELL'S LIVING AGE. Price, 20 cents; $8.00 per year. Littell & Co., Boston.

Recent issues contain all the accustomed variety, but are especially rich in biographical sketches or personal recollections. Two articles appear in the early March issues on Christina Rossetti. "Recollections of James Anthony Froude," by the late Mrs. Alexander Ireland; "Count Moltke, Field Marshal," by Sidney Whitman; "Oliver Wendell Holmes;" "James Darmesteter," by M. Gaston Paris; "Rubinstein," by H. R. Haweis; "Tennyson at Aldworth," by F. G. Kitton, are papers which will be eagerly read. Other notable and timely articles are: "A Change of Czars;" "The Court of Ferrara in the Fifteenth Century;" "Stony Sinai," by E. N. Buxton; "An Old Society Wit," by Mrs. Andrew Crosse; "Single Chamber Democrats," by R. Wallace, M.P.; and "Recollections of the Chinese War," by Colonel Hill James.

POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

Under the title "The Birth of a Sicilian Volcano," Professor A. S. Packard in the March number gives a picturesque illustrated description of the formation of one of the smaller cones that surround Ætna; "The Lesson of the Forest Fires" is set forth by Mr. Bela Hubbard; "Wellner's Sail-Wheel Flying Machine" is described by Miss Helene Bonfort; there is a fully illustrated article on "Copper, Steel, and Bank-note Engraving," by C. W. Dickinson, Jr.; Mrs. Burton Smith contributes an essay entitled "The Mother as a Power for Woman's Advancement."

THE ECLECTIC. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The March number contains: "Wanted, a Newer Trade Unionism," by Matthew Itoh; "Count Moltke," by Sidney Whitman; "Sultan Abdul Hamid;" "Stony Sinai," by E. N. Buxton; Part III of "The Crimea in 1854 and 1894," by Sir Evelyn Wood; "Recollections of Elizabeth Browning and Thackeray," by Henriette Corkran; "Why Should We Learn History," by G. W. Prothero; "Celibacy," by H. E. Stutfield; "India," by C. F. Keary; "Leafless Woods and Gray Moorlands," by a Son of the Marshes; "The Germans at Home," by Vernon Riendall. Other interesting papers are: "A Day with Xenophon's Harriers," "A Letter from a French Atelier," "The Lost Duchess," "The Peasant," and "From the Dark Past."

NEW SCIENCE REVIEW. Price, 50 cents; $2.00 per year. The Trans-Atlantic Publishing Company, New York.

The January (and third) number of the *New Science Review* is before us. It must be extremely satisfactory to the publishers to know that not only have their financial returns confirmed their best expectations in a substantial manner, but the periodical has likewise received unanimous approval from all quarters. The most notable articles in this issue are: "The Union of Astronomy and Astrology," by Major Sir John Cowell; "The New Element of the Atmosphere," by Lord Rayleigh; "The Dangers of Examinations," by General Drayson; "Food Nerves," by T. W. Nunn; "The Railroad in Asia," by Charles Morris; "The Amateur in Science," by Grant Allen; "The Elseviers," by Baroness Salvador.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The March number contains the opening chapters of a striking serial entitled "The Seats of the Mighty," by Gilbert Parker; fiction is further represented by the first installment of a two-part story by Grace Howard Peirce, entitled "Gridou's Pity;" there are additional chapters from Mrs. Ward's serial, "A Singular Life;" John T. Trowbridge writes of "Some Confessions of a Novel-Writer;" two papers of importance are "Immigration and Naturalization," by H. Sidney Everett, and "Some Words on the Ethics of Coöperative Production," by J. M. Ludlow.

THE PETERSON MAGAZINE. Price, 10 cents; $1.00 per year. Penfield Publishing Company, New York.

Contents for March: "Poor John Lawson," by Minnie T. Boyce; "Visit to the Vatican," by Elmer E. Garnsey; "New Song of a Shirt," by Henry L. Stoddard; "The Story of a Poem," by John H. Garnsey; "Leaders

of the French Stage," by Harry P. Mawson; "Washington Literary People," by Marshall Cushing; "The Murray-Hill Romance," by Keyes Becker; "Little Maid of Shakertown," by Emily McBride; "A Chat with My Friends," by Ella Wheeler Wilcox; "Said in Passing," by Henry L. Stoddard.

COSMOPOLITAN. Price, 15 cents; $1.50 per year. Cosmopolitan Publishing Co., Irvington-on-the-Hudson.

In the current number, Maude Lyons contributes a paper on the "Models of Paris;" Ernest Daudet on "A President of France"—M. Carnot; Thos. Taaffe on "We of the Stylus;" Herbert Whitmarsh on "Pearl-diving and its Perils;" J. A. Zarm on "The Observatory of the Vatican;" George Rodenbach, "A Portrait in Bruges." W. Clark Russell's serial, "A Three-Stranded Yarn," is continued, as is also Albion Tourgée's "Story of a Thousand."

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

The third issue for the current year offers its readers an article on "The Lord's Day," by Mr. Gladstone; a dramatic story of the Franco Prussian war, by Conan Doyle; and another interesting series of Napoleon portraits and views, with a paper by Miss Tarbell. "Life on an Ocean-Flyer" is the subject of a descriptive article; "Memoirs of a Minister of France" is by Stanley J. Weyman; and Robert Bridges records a conversation with F. Marion Crawford.

THE NORTH AMERICAN REVIEW. Price, 50 cents; $4.00 per year. Edited by Lloyd Bryce, New York.

This magazine is publishing in twelve chapters the "Personal History of the Second Empire," a historical work of unsurpassed importance which throws a flood of new light upon the checkered career of Napoleon III. and the influences which led to the collapse of his empire in the gigantic struggle with united Germany under Wilhelm I. and his Iron Chancellor. The third installment (March) is before us.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Company, New York City.

The March number contains as leading articles: "Ben Bolt;" "Types of English Beauty;" "Masterpieces of Greek Sculpture;" "Jeanne d'Arc;" "How a Spectacular is Produced;" "Artists and Their Studios," giving sketches of William M. Chase, J. Wells Champney, and C. Ayer Whipple. Besides these there are short stories, sketches, poems, book reviews, and fashions.

THE CENTURY MAGAZINE. Price, 35 cents; $4.00 per year. The Century Company, New York.

Readers of Marion Crawford's novel "Casa Braccio," now appearing in *The Century*, will be interested in knowing that the story, as printed so far, is true, except that the scene of the actual occurrence was in South America instead of in Italy.

The March number contains a feast of good things.

HOME AND COUNTRY. Price, 15 cents; $1.50 per year. Joseph W. Kay, New York.

The material and illustrations in the April number appropriate to the Easter season are selected by Reverend T. P. Hughes, D D., rector of the Church of the Holy Sepulchre, New York, who is also an author of wide reputation, and was for twenty years a chaplain in the British Army at Peshawar, Afghanistan.

A MANUAL OF DISEASES OF THE EAR. By Albert H. Buck. Cloth; large 16mo; pp. 457. Price $2.50.

This is the second edition of this well known manual, with a new chapter on analysis of symptoms, additional matter on chronic purulent inflammation of the middle ear, and amplification of the text generally. Coming from such a source, and with the length of time that it has been before the public, the work needs no special commendation at our hands. A notable feature, however, is the addition of some twenty five pages at the end of the book for the jotting down of special memoranda.

ON THE ORIGIN OF LANGUAGE AND THE LOGO THEORY. By Ludwig Noiré. Paper; 16mo; pp 57. Price, 15 cents. Open Court Publishing Co., Chicago.

This is Number 11 of the bi-monthly publications known as The Religion of Science Library. The title is sufficiently indicative of its character, and we commend it most heartily to those who are interested in the topics discussed.

ANTISEPSIS AND ANTISEPTICS. By Charles M. Buchanan. Cloth; small 16mo; pp. 352. Price $1.25. The Tribune Co., Newark, N. J.

This is an endeavor to concentrate our present knowledge of antiseptics and antisepsis.

Therapeutic Brevities.

Jambul in Diabetes.—I have had no result at all with the powdered preparations of Jambul in diabetes, and in fact gave up the use of the drug altogether until Messrs. Parke, Davis & Co. put their fluid extract on the market, and this I have given, more or less, to all my patients suffering from diabetes, with excellent results.

While I do not claim Jambul to be a specific, I do believe the fluid extract of the seeds is the best and most reliable agent known for the purpose of arresting the diabetic process. It has been my custom to give it in five-minim doses four times a day for a couple of weeks; three-minim doses for the next two weeks; then to gradually run it up to ten minims for the succeeding fortnight; then gradually reducing so as to come to a full stop at the end of the sixth week. Meantime I note carefully day by day the specific gravity and other conditions of the urine. If sugar reappears, the drug is resorted to again and pushed until this pathological feature is eliminated.

While Jambul may not permanently relieve diabetes, it certainly takes away the excessive nervous symptoms, the feeling of uneasiness, and allows the patient to go about his daily labor with ease and comfort, to say nothing of being able to sit at the table and eat moderately of what is preferred—in fact, the patient once more feels like a human being and not like an animal condemned to bran-mashes and other tasteless and unsatisfactory messes. —Doctor Oliver J. D. Hughes, before the New Haven County (Conn.) Medical Association.

Omental Hernia.—A new method for the radical cure of large omental herniæ has been devised by Gersung (*Centralblatt für Chirurgie*). After making the necessary incision, the sac is freed on every side by blunt dissection, then opened, the omentum ligated, and the stumps with any coils of intestine returned; the sac is then cut off, and the peritoneum sutured on a level with the bottom of the wound. The median borders of the recti muscles are then opened with scissors, the peritoneum sutured, and next the abdominal wound is sutured—entering the needle quite near the margin to prevent inversion of the skin; as the needle reaches the muscle a greater thickness is taken in order to bring the margins together, when the sutures are tied, or the edges may overlap. To prevent the formation of a pocket, Billroth's method is employed: this consists in including the sutured margins of the peritoneum in every second suture of the abdominal wall.

Caulophyllum.—A good remedy in congestive dysmenorrhœa, and also in the spasmodic type, from whatever cause, is Blue Cohosh. It is indicated when there is heaviness, dragging, fullness in the hypogastric region, scanty flow with expulsive pains, and sympathetic pain in the rectum and bladder. In threatened abortion with spasmodic pain it is an almost specific. In labor with rigid os and vagina it is a valuable remedy, correcting the condition quickly, especially if frequently given with small doses of lobelia or gelsemium. In rheumatism of an acute form, especially if affecting the smaller joints, it may supersede other remedies, and it is an ingredient of all the old alteratives. Its most marked influence, however, is upon the muscular structure of the female reproductive organs. One drop of the fluid extract at a dose, frequently repeated, or larger doses if required.—*Medical Standard.*

Apocynum Cannabinum as a Heart Tonic.—Doctor Glinski declares this drug is an active cardiac tonic. Being himself affected with hypertrophy of the left ventricle, with dilatation, mitral murmur, etc., he took fifteen drops of fluid extract daily in three doses, with the result of complete amelioration of all functional symptoms. Further trials in other cases of compensatory troubles met with like success. He further declares that *Apocynum cannabinum*, while being similar in action to digitalis, is altogether free from the cumulative action of the latter drug. No secondary effects have ever been observed other than augmentation of arterial pulsations. In dilatation of the heart it diminishes the area of dullness, increases the secretion of urine, allays palpitation, and favors secretion.—*Journal des Practiciens.*

Ox-Gall in Typhoid.—Bile is a normal physiological antiseptic:

And an antipyretic:

Also a tonic to the heart, decreasing the number of beats, but increasing the force of the individual beat; in other words, producing a rise in the blood-pressure up to a certain extent:

It produces increased contraction of the muscular structure of the intestine:

Diarrhœa, meteorism, hæmorrhage, are not contra-indications to its use:

It is, in my opinion, the best remedy in the treatment of typhoid fever:

It is possible that the bile of other herbivorous animals (sheep, goat) is of the same composition as ox-gall, and will therefore produce the same effect.—Doctor Summa, in *St. Louis Medical and Surgical Journal.*

Quinine in Pregnancy.—An exhaustive investigation looking to the effect of Quinine salt during gestation has brought forth the following conclusions: The existence of pregnancy is no bar to the administration of the drug; in fevers and other affections during pregnancy the effects of Quinine are more marked than at any other time; abortion following the administration of the drug is the result either of the original malady or of idiosyncrasy—allowing for idiosyncrasy in cases in which a tendency to abortion exists, and in others, as a matter of precaution Quinine is best administered with a sedative, such as opium. The old, staid view of the action of Quinine on the duration of pregnancy is not borne out in any degree by clinical experience.—*Medical Progress.*

Physiological Action of Ethyl Bromide.—The studies of Dastre have proven that Bromide of Ethyl is adapted for use in the human subject, the narcosis induced being similar to that of chloroform—both act on the brain, then on the medulla, and lastly on the bulb. Chloroform chemically irritates each centre before paralyzing it; Bromide of Ethyl acts directly, there being consequently no excitement and no laryngeal reflex to be feared. Still more, it is a vaso-dilator; it produces congestion of the head, and thus no syncope is to be feared; at the same time, this permits of the sitting posture of the patient, so necessary in certain operations on the throat.—Doctor C. G. Cumston, in *Boston Medical and Surgical Journal.*

Mobility in Fractures.—M. Bumm is an advocate of very moderate motion in fracture treatment, claiming that hasty immobilization often leads to unpleasant results, while, on the contrary, early massage and joint action, with gymnastics, favor restoration of muscular strength, articular motion, and consolidation of the callus.

He believes in massage throughout treatment. When the point of fracture is close to the joint, he allows the dressings to remain undisturbed until the tenth or twelfth day, or a longer time with oblique fracture through the humerus or femur.—*Le Progrès Médical.*

Urticaria.—The remedy *par excellence* is Pilocarpine, which should be pushed to the point of tolerance. I prefer to employ hypodermatically in doses of one-sixth to one-half grain every day or every second day. For children, however, it is preferably administered by the mouth, and the dose should be gradually increased; it is well, moreover, for the physician to remain fifteen or twenty minutes after its administration in order to watch results.—Doctor Abrahams, in *Medical Record.*

Treatment of Bubo.—M. Laub has reported a series of cases of bubo, which he has treated with great success by Welander's method. This consists in, first, making several narrow, deep punctures and evacuating the pus, then injecting deeply a 1:1000 solution of nitrate of silver through each puncture, after which a compress and bandage are applied. Reaction is moderate, inflammation ceases, and in about ten days cure is complete.—*Berliner Klinische Wochenschrift.*

Asafœtida for Insomnia.—A five-grain pill of Asafœtida, exhibited after supper and repeated at bed-time, will often bring refreshing sleep. In mild delirium, and especially during the period of unrest that precedes an attack of delirium tremens, the injection, by rectum, of two ounces of mixture of Asafœtida will, in many cases, produce the much-needed sleep, without recourse to the more dangerous narcotics.—*Louisville Medical Monthly.*

Chronic Eczema.—In eczema of long standing, where the parts are much thickened and infiltrated, Doctor Cantrell advises:

Salicylic acid, 20 grains.
Green soap, 15 grains.
Oil of cade, 15 minims.
Ointment of zinc oxide, 240 grains.

To be applied three times daily, the parts being well bandaged.

—*Philadelphia Polyclinic.*

For Ulceration of Cornea or Conjunctivitis.—

℞ Hydrastis sulph. flavas, 5 grains.
Acidi boracici, 5 grains.
Sodii boras, 5 grains.
Tinct. opii deodoratæ, ½ drachm.
Aquæ dest., 1 ounce.

M. Sig.: One or two drops in the eye two or three times a day. The quantity may be increased.

—Doctor Scott (Cleveland).

Mastitis.—Doctor J. T. Hall recommends for the prevention of mastitis and the relief of engorged and painful breasts, one drop of tincture of Aconite and ten grains of Potassium Acetate every four hours. He declares that in more than one hundred cases the remedy has never once failed.—*Medical Times.*

Magnesium Sulphate for Burns.—Doctor N. F. Howard, in a case of extensive and painful burns of the hands, obtained almost instant relief by immersing for one hour in a solution of one pound of Epsom Salt in two quarts of water. A dressing of lime-water and oil was then applied and the raw parts covered with oxide of zinc.—*Atlanta Medical and Surgical Journal.*

Application for Warts.—The following is recommended by *L'Union Medicale:*

Concentrated acetic acid, 10 parts.
Precipitated sulphur, 20 parts.
Glycerin, 50 parts.

These are to be thoroughly mixed, and the warts painted therewith daily until they become detached.

Chronic Alcoholism.—

℞ Tincture nux vomica, 90 minims.
Tincture capsicum, 4 drachms.
Tincture calumba, 2 ounces.
Tincture gentian comp., 2 ounces.
Syrup Hematic Hypophosphites, to make 8 ounces.

A tablespoonful in water, half an hour before each meal.

Chorea.—Put the patient to bed, regulate the diet carefully, prohibit all stimulants including tea and coffee, and give Fowler's Solution in ascending doses to the point of toleration. In addition it is well to accustom the patient to a series of systematic exercises such as will tend to give control of coördinate movements.—Doctor J. M. Taylor.

Oleum Gynocardiæ.—This is largely recommended as an anti-rheumatic, employed both externally and internally. It is best given in from one- to five-minim doses, in cod-liver oil, until nausea makes its appearance, when it may be withdrawn, to be resumed a little later. It is even claimed to be specific in some forms of leprosy.—*The Summary.*

Passiflora Incarnata.—For great nervous excitement and restlessness I give a half-teaspoonful dose of tincture *Passiflora incarnata* every three hours. After the second dose, if there is no evidence of sleep, I double the dose both as to time and to frequency, thereby securing the desired effect.—Doctor Merson, in *Homœopathic News.*

Dysmenorrhœa.—For twenty years I have used Sanguinaria exclusively in the treatment of painful menstruation. I commence two weeks before the expected return of the menses, and give a teaspoonful dose three times a day and a teaspoonful on going to bed.—Doctor J. M. Hall, in *Chicago Medical Times.*

Chronic Cough and Chronic Bronchitis.—

℞ Dilute hydrocyanic acid, 24 minims.
Spirits of chloroform, 2 drachms.
Dilute hydrobromic acid, 3 drachms.
Tincture squill, 45 minims.
Syrup Hematic Hypophosphites, to make 3 ounces.

A dessertspoonful every three hours.

Bryonia.—One of the most interesting therapeutic resuscitations is that of Bryonia. Employed by Galen in practically the same states as to-day, it was later associated with homœopathy and fell more or less into disuse, but is once more regaining professional favor.—*Exchange.*

"Specifics" in Diphtheria.—According to Doctor A. Campbell White, of New York, any remedy which will prolong the life of the patient with diphtheria beyond the thirteenth day has carried him beyond the danger of death and may be called a specific.

Sourwood in Anasarca.—A writer in the *Chicago Medical Times* declares that an extract made from the leaves of *Oxydendron arboreum* is most effective in general anasarca. The dose at first is small, but must be gradually increased as it can be borne.

Cocillana in Bronchitis.—It is said that from five to twenty-five minims of the fluid extract of Cocillana given in chronic bronchitis secures expectorant effects without depression, and at the same time helps to improve the appetite.—*Southern Clinic.*

Asthma.—Euphorbia is advised as an excellent remedy in the management of those forms of this malady in which there is an absence of organic change.—*Exchange.*

Medical Progress.

THE TREATMENT OF INTESTINAL OBSTRUCTION.—Physicians and surgeons are still far from agreed on the precise indications for surgical intervention in cases of intestinal obstruction. The physicians, on the one hand, point to numerous recoveries from the most desperate plights obtained, or, at any rate, facilitated, by purely medical means, while the surgeons attribute the comparatively large mortality which follows operations undertaken for the relief of this condition to the fact that the patient does not come into their hands until medicine has done its worst and the conditions have become so unfavorable that all the skill in the world must often prove ineffectual in averting the fatal termination. The subject has come up for discussion several times during the past few weeks, without apparently bringing us any nearer a *modus vivendi*. One variety of intestinal obstruction which has received special attention is the comparatively rare form in which the obstruction is due to the impaction somewhere in the intestinal canal of one or more gall-stones. Although the idea of surgical intervention naturally occurs to one as the speediest and most certain plan of affording relief in this condition, there are numerous instances on record in which persons apparently on the verge of dissolution have unexpectedly recovered, the calculus having at last succeeded in finding its way past the seat of obstruction. As it can only in very exceptional cases be possible to diagnose the exact nature of the condition previous to operation, the question of the treatment of this precise lesion does not often suggest itself either to the physician or the surgeon, the latter only being enabled to ascertain the nature of the obstruction when he has cut into the abdomen. In any event, cases of death from impacted gall-stones are so rare that many surgeons in active practice have never met with a single example, and the various museums attached to our medical schools contain few, if any, pathological specimens illustrating the morbid appearances.

Statistics appear to teach us that surgical intervention in desperate cases holds out very little hope of a successful issue, and until cases have become surgically desperate physician and patient alike are loath to abandon the usual measures in favor of the laparotomist's knife. A dispassionate review of such statistics as are at present available seems to justify the assertion that less lives would be lost by strict adherence to medical treatment to the bitter end, than would be saved by early surgical intervention. Undoubtedly the majority of cases of intestinal obstruction from all causes yield to the milder plan of treatment, and the complications which are so frequently present in the severer cases are but too apt to stultify the surgeon's skill. Moreover, as a matter of fact, the question of medical *versus* surgical treatment cannot be said to present itself except in a few large towns which are fortunate enough to possess surgeons with the experience and the courage to undertake such operations with a reasonable prospect of a successful issue. In the country, public opinion would not sanction immediate resort to laparotomy, and practitioners, whatever their individual proficiency, would hesitate to incur the responsibility of advising or performing such operations.

A gall-stone in the intestines is a troublesome guest. Even when it does not forthwith bring about a crisis, it is apt to set up attacks of intestinal obstruction from time to time, either by becoming impacted in the ileo-cæcal valve or by causing spasmodic contraction of the irritated walls, or, as in two cases recently published by Mr. Mayo Robson, by determining volvulus. Cases such as these are of necessity only amenable to surgery, and when this is not obtainable must end fatally. Even when the surgeon discovers the nature of the obstructing body, the question remains, what ought he to do with it? Should he try to push it along the canal until it has cleared the ileo-cæcal valve; should he endeavor to break it into pieces by needling through the coats of the irritated intestine; or is he justified in incising the gut and removing the stone through the aperture? When it can be forced or coaxed through the valve it would appear to be tolerably safe to leave to Nature the task of expulsion, but when it comes to choosing between needling and removal through an incision *ad hoc* few surgeons would hesitate to prefer the latter, recent advances in intestinal surgery enabling this to be done without adding materially to the patient's risks. —*Medical Press and Circular.*

INFECTIOUS DISEASES.—What causes scarlatina? Bacteria? No; a specific poison. What makes serpent venom dangerous? Bacteria? No; a poison. What causes the convulsions of tetanus and strychnine? Poisons, in both cases. In the infectious diseases we do not know, may never know, the exact nature and origin of these poisons. Each produces certain typical phenomena just as do external drug poisons. A tyro can differ-

entiate the poisoning resulting from opium, arsenic, atropine, or strychnine.

We have all grades of infectious diseases, from the mild to the malignant, depending upon the temperament and constitution of the patient. And these poisons manifest their presence in various pathological ways, depending upon their affinity for certain portions of the organism, just as drug poisons do.

Bacteria are but incidental features. If we prepare a solution of strychnine and leave it exposed to the air, it will soon contain bacteria. But if we now inject this solution into an animal, we will still get the characteristic phenomena of strychnine poisoning. Inoculations of bacteria may infect by conveying into the system a sufficient quantity of a poison to cause reaction. A very small amount of any of the poisonous alkaloids produces their typical effects.

All poisons affect the channels of elimination and the nervous system. In the infectious diseases, nephritis, diarrhœas, pneumonia, bronchitis, skin eruptions and nervous disturbances are frequent and distressing complications.

In cases of drug poisoning, we look to elimination and chemical and physiological antidotes for relief. In the infectious diseases, similar measures will yield most benefit. As we do not know the chemical composition of these poisons, we cannot provide an accurate chemical antidote, but we do know that drugs containing a large amount of oxygen in loose combination exercise a very favorable influence over all vegetable and animal poisons. These drugs are the antiseptics and should be given freely. The emunctories should be stimulated, especially the skin, and nervous symptoms combated by physiological antidotes when they threaten to shock the patient too severely.

Poisons break down the blood-corpuscles very rapidly, possibly by abstracting oxygen; and clinically the iron salts, such as the tincture of the chloride in combination with chlorate of potassium, mercury and other drugs, which increase the formation of blood-corpuscles, exert a beneficial influence.—Doctor J. J. Lawrence, in *Medical Brief*.

Morphinomania.—Let me warn, with all the weight I can command, every doctor who may be dallying with this drug or who may think its self-taking called for—and this warning holds with special force if the subdermic method be practiced—let me warn him that he is inviting disaster by jeopardizing interests vital to his well-being; and let me urge him to pause, and to ponder well, whether, despite this warning, he dare take such risk. Let him not be blinded by any underestimate of the poppy's power to ensnare. Let him not be deluded by an overconfidence in his own strength to resist; for along this line history has repeated itself with sorrowful frequency, and—as my experience will well attest—on these two treacherous rocks hundreds of promising lives have gone awreck. . . .

I have no wish to pose as an alarmist, but I will say that many a doctor who gives himself a daily hypodermatic dose of morphine for a fortnight will come perilously close to the danger line—beyoud which, bondage begins. . . .

Regarding the over-use of morphine, never was there so little excuse for it as now, for never were the means at command to ease pain and bring sleep equal to those of to-day. Modern medicine is richly equipped in this regard, and if these resources be fully availed of it will go far to decrease this ill. . . .

Teachers in medical schools should realize that they have opportunity to wield great influence for good, and by word and deed they should improve it. To do so would strike right at the root of this evil, for I truly think the junior members of the profession are the greatest sinners in this regard; and if, by timely counsel from their preceptors and college instructors, the thousands who year after year begin a medical career can be brought to believe the danger incident to an incautious or needless giving of morphine, and then shape their practice in keeping with that belief, the good work will be largely done. . . .

More and more the older medical men, impelled by larger wisdom, or an experience often unhappy, are quitting the syringe; more and more rarely are they using morphine.—Doctor J B. Mattison, in "Morphinism in Medical Men."

Cancer of the Kidney.—A man, aged thirty-nine, had for six or seven years been subject to recurrent attacks of hæmaturia, at first only a few times yearly, but during the last three years oftener. The attacks came on independently of exertion or any other cause, and were not, as a rule, preceded or followed by pain. Between the attacks the urine was normal, but latterly showed a trace of albumen. Only once, a few years ago, had he passed a small stone, the size of a pin's head. No tenesmus, not even during the attacks. Three years ago a hardening began to be felt under the right costal margin, which gradually increased until a year ago, when it

began to develop more rapidly. The tumor was never tender, but examination has sometimes caused slight pain. As the attacks of hæmaturia became more frequent the patient's general health suffered. The tumor, which could be felt midway between the costal margin and Poupart's ligament, was hard, almost round, the size of a man's fist, freely movable, and could be pushed up so that its upper part disappeared under the costal margin; its surface was somewhat uneven, and the ascending colon ran obliquely across it. Nephrectomy was performed, as the left kidney was found normal and no metastases were detected in the peritoneal cavity. The patient made an uninterrupted recovery.

On examination the tumor was found to be a primary carcinoma. That the hæmaturia from the first, six or seven years ago, was caused by the malignant new growth, I believe, for the following reasons: There had never been any symptoms of stone or disease of the bladder: All the symptoms pointed to the kidney being the cause of the bleeding: Only once a very small stone had passed, but too small and smooth to cause hæmaturia: In the extirpated kidney no concretion was found, and in the left none could be felt. Although cases of hæmaturia occur in cases where on laparotomy nothing pathological can be detected, is it rash to conclude when, as in this case, a malignant tumor appears after a few years' time, that this has been the cause of the hæmaturia from the first?—*Medical and Surgical Reporter.*

Heart Syphilis.—Syphilis of the heart is a comparatively rare affection, the anatomical changes of which usually commence in the myocardium and thence extend to the endocardium and pericardium. They consist in the formation of the specific infectious granulation tissue in the form of a reddish-gray infiltration, that develops principally around the smaller vessels, whence it proliferates into the connective-tissue interstices between the muscle bundles and muscle fibres. The granulation tissue may grow and form compact circumscribed masses, which after a while change to typical gummata, attaining perhaps the size of a hazelnut or even of a walnut. In other cases the connective-tissue formation will be more abundant, and an interstitial gummatous myocarditis will form. In still other cases cardio-sclerosis may result; or, finally, an endocarditis syphilitica Gummatous pericarditis and endocarditis are not infrequently present after the disease has lasted for some time.

The clinical symptoms of heart syphilis are not pronounced, and the affection is mostly found in the tertiary stage. Severe disturbances in the heart's action, however, rarely occur before the fourth year after infection, and are by no means characteristic. The pulse is irregular or rhythmic, or there may be intermissions; the patient suffers from palpitation, shortness of breath, and an oppressive feeling, or may apparently be entirely well when suddenly a severe attack of heart failure sets in, that may result in death. In other cases death results after symptoms of chronic insufficiency of the heart. Sometimes all symptoms may disappear completely and the patient be apparently cured. The diagnosis is not easy, and in making it the history of a syphilis at any time of the patient's life must always be taken into consideration. An early diagnosis is of the greatest importance, since it gives us the only indication for a successful treatment with specifics.—*St. Petersburger Medicinische Wochenschrift.*

Tablet Triturates.—Tablet triturates are certainly "convenient and elegant," but as prepared, I think they are at times far from being "safe and accurate."

I have carefully examined samples from several different manufacturers in various States and find the same objection to all namely, that the ingredients are not triturated but simply mixed. This might do very well where the medicines are of a harmless nature, although by no means commendable but when tablets containing arsenic, strychnine and the like are so carelessly made that you can dig out the various combinations with a sharp-pointed knife under the naked eye, I think it is time to cry halt.

In my humble opinion all mixtures ought to be ground and triturated so that the finished tablet should exhibit one uniform color throughout the whole, and the individual drugs should not be distinguishable even under a moderate magnifying glass. Only such can be safe.—"A Country Doctor," in the *Medical Record.*

Crises of Disease.—Acute diseases come to the crisis in fourteen days; the fourth day is the indicator of the seventh; the eighth is the commencement of the second week. The eleventh day should likewise be attended to for it is the fourth of the second week; we should, also, remark the seventeenth day, for it is the fourth from the fourteenth and the seventh from the eleventh.—*Medical Brief.*

DOCTOR E. D. WORTHINGTON.

The Medical Age.

VOL. XIII. DETROIT, MARCH 25th, 1895. NO. 6.

Original Articles.

TYPHOID-MALARIAL REMITTENT FEVER.

BY DOCTOR JOAO VINCENTE TORRES HOMEM.*

Malarial infection often manifests itself by a pyrexia of more or less frankly remittent type, accompanied by symptoms very analogous to those of typhoid fever, in the first or second week simulating them perfectly, and giving rise to errors of diagnosis. A practitioner who has not been accustomed to observe the diseases of the sub-tropics may be easily deceived, especially if in doubt regarding the patient's history.

Before 1873 I very rarely observed a case of genuine typhoid fever (ileo-typhus), while I met with many examples of the pyretological species in question—mainly in the Mizericordia Hospital. These examples, which were multiplied in other hospitals, as well as in private practice, gave me a satisfactory explanation of the opinion of several colleagues, and very distinguished ones, who believed that abdominal typhus was not rare and that it yielded in a few days to quinine.

The similarity of the symptoms of the two pyrexias is such that, the patient being seen for the first time after the third day of the disease, if the physician is deprived of the aid of extraneous history, it is only *a posteriori* —that is, after the use of quinine—that the diagnosis can be definitely established. It was doubtless an acquaintance with facts of this kind that led Germain Sée (in a series of clinical lectures upon the value of thermometry in the diagnosis of acute febrile diseases, published in the *Gazette des Hôpitaux de Paris*) to express himself as follows:

There is nothing more difficult than the diagnosis of typhoid fever in its commencement, especially in malarial countries, and yet there are few questions in practical medicine of more importance.

As I shall show a little farther on, in the differential diagnosis of these doubtful cases the thermometer, consulted in the first forty-eight hours, becomes a great resource. Some cases of typhoid seen in Rio de Janeiro begin with a well marked intermittent fever, contracted or not in localities surrounded by marshes, which gradually becomes remittent until its nature is completely transformed; the history of the case, then, should not always inspire confidence, since more than once it has led me from the path of truth.

Doctor Griesinger describes a grave form of remittent fever* which is very analogous to the typhoid-malarial remittent fever of Rio de Janeiro,—this appellation, which I am accustomed to use, indicates the type of the pyrexia, its nature, and the symptomatic form it assumes; while the celebrated Berlin professor ranges under the denomination of "grave forms of remittent fever" not only the species forming the heading of this paper, but also the *bilious remittent fever of the tropics*, or hæmorrhagic bilious fever, which has deservedly obtained from all pyretologists, as well as from those who occupy themselves with the diseases of tropical climates, a special and minute description.

Typhoid-malarial remittent fever was of old observed on a large scale, assuming a more or less grave character, and receiving the name of typhoid pernicious fever.

From reading the work of Doctor Sigaud† as well as the excellent monograph of Baron de Lavradio,‡ it is easily deducible not only

*Translated by Surgeon Geo. P. Bradley, U. S. Navy.

*W. Griesinger: "Traite des Maladies Infectienses."

† "Du Climat et des Maladies du Brézil," 1844.

‡ "Esboço Historico das Epidemias que teem Grassado na Cidade do Rio de Janeiro," Jesde 1830 a 1870.

that this pyrexia was frequent, but also that in some instances it was entirely confounded with the dothen-enteritis (typhus abdominalis) of Bretonneau.

In the ætiology of the nosological species I am treating of, the influence of the malarial miasm is evident; the course which the disease follows, the disorders of digestion, the congestion of the liver and spleen manifest in all the cases, the promptness with which all the symptoms yield to quinine, demonstrate this influence superabundantly. But the frank typhoid form assumed by the pyrexia—very different from the recognized and varied forms of the pernicious fevers—the typhous element which dominates the whole array of symptoms, leads me to believe that, besides the malarial miasm, another cause is acting upon the patient's system, another infection altering his blood-crasis; this other cause can only be the miasm of animal origin which produces genuine typhoid fever and the various species of typhus observed in practice. From the combined action of these two morbigenic principles, typhoid-malarial remittent fever originates; just as yellow fever also originates if certain topographical and meteorological conditions are concurrent; just as genuine typhoid fever too originates, with well marked intermittent paroxysms at the outset of the disease, midway in its regular course, or on its termination, as is very common in marshy countries. If mixed miasmatic poisoning (vegeto-animal) produces a pyrexia of malarial basis and of typhoid form, it is because the malarial miasm predominates over the typhous; in the contrary case, the disease developed is a form of typhoid fever having merely the symptomatic form of an intermittent fever, characterized by well marked paroxysms, ordinarily quotidian, supervening at various periods of the principal affection, and not exerting the slightest influence on its progress or termination. If the patient dies, in the first case, whatever may have been the symptoms observed, whatever its gravity, the autopsy does not reveal the presence of the intestinal lesions which anatomically characterize abdominal typhus; it discloses only the splenic and hepatic changes which are so frequent in acute malarial poisoning. In the second case, however regular may have been the paroxysms, however deficient the typhoid symptomatology, necropsy shows us the true nature of the disease; the anatomo-pathological phenomena of ileo-typhus are patent in the small intestines.

As regards the therapeutics, in the first case the patient recovers in a few days, after taking quinine (Cases 1, 2, and 3); in the second, despite the methodical and prolonged use of this drug, despite the energy with which it has been administered, the paroxysms keep on approximating one another, the fever takes on the continued type, pursues its onward course, and the symptoms characterizing typhoid fever become more and more accentuated, until there can no longer exist any doubt about the diagnosis (Cases 4 and 5).

In a certain number of cases the typhoid form assumed by the malarial infection depends upon the condition of impoverishment and wretchedness under which labors the system of the person who is acted on by the effluvia of the marshes. A diet insufficient in quality and quantity; living in a dark, low, damp and ill-ventilated room where the atmosphere is confined; bodily fatigue from excessive labor; lowering of *morale* by profound chagrin and other depressing passions,—such are the circumstances which favor the appearance of typhoid symptoms in malarial fevers, as in any other acute febrile affection.

The pyrexia under consideration almost always commences with the remittent type without any preceding periodical attacks; exceptionally these latter are observed, when the patient has not made use of suitable treatment—in spite of suffering he continues to work, exposed to rain, dampness, the sun, without regard to the laws of hygiene; and this is notable in the persons who frequent the wards of the Mizericordia Hospital, the majority of whom are poor laborers or wretched slaves. Whether with prodromata or without, the disease ordinarily begins with a severe and prolonged chill, or with frequent shivering-fits, which grow weaker with a sensation of heat in the face. Frontal headache appears, prostration of strength, rheumatoid pains in the lower limbs, and fever. In the first twenty-four hours the febrile temperature reaches 103° or even 104° at the period

of exacerbation, to diminish a degree or two during remission; this remission almost always occurs from 3 o'clock in the morning to 10 or 11 A.M., and the maximum exacerbation takes place from 5 P.M. to midnight. The pulse, usually strong and full, keeps pace in frequency with the variations of the thermometer; with the maximum temperature it beats 110 to 120 times per minute, with the minimum 90 to 100. The tongue becomes furred and dry in the centre, red at the tip and edges; in the cases where the bilious element is added to the typhoid (bilious typhoid fever of Griesinger) the coating is of a deep yellow. The dryness of the tongue is a symptom that manifests itself very early (from the second to the third day). There is slight thirst, complete anorexia, constipation, rarely bilious diarrhœa; great sensitiveness in epigastrium and right hypochondrium, excited particularly by palpation and percussion; liver increased in size, especially in its upper limits, in cases with bilious complication. Some jaundice is noted. The spleen is ordinarily of normal size during the first three days of the disease, a little enlarged from the fourth day on. Moderate abdominal tympanites in some cases (the graver ones), no tympanites in others; pain in iliac regions in a small number of patients, but very rarely limited exclusively to the right; gurgling in iliac fossæ in almost all, sometimes only on the right, sometimes on both sides. Urine scanty, red, concentrated, free from albumen; I observed albuminuria in only one case, little marked, and disappearing at the end of twenty-four hours, after the operation of a saline purgative.

With these symptoms, pertaining to many sorts of malarial fever, are combined others special to typhoid fever. The patient's face takes on from the beginning an expression of stupidity and apathy; lying upon his back, the patient with difficulty moves in bed and answers the questions addressed to him; he can only sit up in bed when supported by two persons, for he feels extremely prostrated. Sudamina are observed upon the cutaneous surface, and at times petechia spots, when there is a hæmorrhagic tendency, as is not uncommon; I only once met with the rosellar typhoid eruption, so significant in the diagnosis of typhoid fever.

Epistaxis sometimes appears in the first three days. In the respiratory organs we notice the sounds proper to bronchial catarrh. Capillary bronchitis, or even lobar pneumonia, occasionally supervenes and aggravates the patient's condition. In the first few days subdelirium, insomnia and restlessness appear during the night; if the disease goes beyond the first week, other grave symptoms declare themselves in the nervous system, such as coma, somnolence, convulsive tremor of the upper limbs and tongue, carphologia, and subsultus tendinum. I observed enterorrhagia in three cases, and in one the loss of blood by the intestines was so great that it required the use of astringents in the form of pill and enema; all the patients recovered, notwithstanding so alarming a symptom. In another, a sailor by occupation, an obstinate stomatorrhagia occurred, which yielded only to the perchloride of iron.

The fact deserves special mention that I never observed vomiting in typhoid-malarial remittent fever, even when the bilious complication appeared. I have recorded fifty-eight cases of this nosological species, collected in the hospitals from 1866 to 1874, and in none of them was vomiting reported as a symptom.

In a certain number of cases, especially of those which last the longest, parotitis develops at the end of the disease; this is a serious complication if suppuration of the gland cannot be prevented. In one patient who recovered in twelve days, a phlegmon of the right gluteal region appeared at the beginning of convalescence, and terminated by suppuration.

Whether it commences by well marked intermittent paroxysms, or assumes the remittent type from the very outset, the disease has a short duration; in the great majority of cases it runs its course in from seven to fourteen days; often convalescence is established immediately after the first week, if the patient is observed from the beginning of the illness and appropriate treatment is at once instituted and persevered in with the requisite energy. It is very common to observe during convalescence the appearance of periodical attacks of quotidian type; in some these paroxysms are characterized by the three stages; in others, the greater number,

the initial chill is lacking; in others, finally, the paroxysm is only revealed by sweats, general or partial, which manifest themselves at night or early morning and are regarded by the nurses as the expression of the convalescent's weakness.

When typhoid-malarial remittent fever terminates by recovery, as is the general rule, the remission becomes more marked and the evening fever lessens; the first symptoms to disappear under the action of a good dose of quinine are, the stupor of face, the general prostration of strength, the dryness of the tongue, and the delirium at night. Little by little the typhoid symptoms are dissipated; then the congestion of the abdominal viscera yields; and it is only at the last that bronchitis ceases, which at times attends the patient in convalescence and requires special medication. The rapidity with which strength and appetite are regained is worthy of note, in contrast with what is observed in genuine typhoid fever—where convalescences are very tardy, lasting at times longer than the disease itself.

In the cases of fatal termination the adynamia progresses; delirium becomes constant; the belly is tympanitic—or tympanites increases if it has previously existed; the tongue becomes rough, very red, and pointed; the bronchial catarrh assumes great proportions; the pulse grows more and more feeble and frequent; and the remissions of febrile heat keep growing gradually less prominent, and hardly a difference of 1 to 1.5 degrees is perceived between the morning and the evening temperature—the thermometer rises to 104° and even 106°. Later on, the extremities grow cold; the radial pulse reaches 140 or more; heat becomes centralized, the thermometer, applied in the axilla, indicating 106° and over; coma supervenes; a profuse and clammy sweat bathes the skin; and the agony, accompanied by oppressed and uneasy respiration, or by the tracheal râle, lasts for several hours (Cases 6 and 7).

Of fifty-eight patients with typhoid-malarial remittent fever observed in the hospital wards, only five died, and of these one had suppurative parotitis that brought him to the extreme point of marasmus, a profuse and obstinate diarrhœa appearing at the last. All five cases entered the hospital after the third day of the disease; in two there wa chronic alcoholism, confirmed by autopsy; i one, pulmonary tuberculosis, diagnosed durin life and verified post-mortem. Necropsy re vealed absence of jaundice in all; absence o rigor mortis in three; injection of pia mate in four (in one particularly, the vessels of thi serous membrane were excessively engorge and there was also an abundant sub-arachnoi effusion); the substance of the encephalo was injected in two, a little softened in th white matter of the left hemisphere in on congestion of base of lungs in three; larg centre of red hepatization in lower lobe c right lung in one; tuberculosis in breaking down stage of upper lobe of right lung i one; strong adhesions of costal to pulmonar pleura in two; partial emphysema of left lun in one; injection of bronchial mucous mem brane and diffused catarrh throughout i four; effusion of sixty grammes of yellowis serum in pericardium in one; milky patche on visceral layer of pericardium in two; fatt degeneration of heart, mainly of right ver tricle, in two; atheromatous degeneration c aorta in three, in one of which there was als incrustation upon the sigmoid aortic valve very marked injection of mucous membran of stomach in four; softening of mucous mem brane, which was easily detected by handl of scalpel, in one; enlargement of liver in a —fatty degeneration of the gland in tw (total and complete in one, partial and ci cumscribed in the other), and great hype æmia of hepatic parenchyma in the othe three; almost entire emptiness of gall-bladde in one; excessive fullness of gall-bladder i two, the bile appearing very dense and black ish; spleen much enlarged in one, a littl increased in size in three, and of normal vo ume in one—the consistence of this orga was much lessened in only one of the thre cases in which it was a little enlarged.

In the small intestines, after a minute ex amination, nothing peculiar to typhoid feve was found; there was some injection of mu cous membrane of duodenum, jejunum, an ileum, in two cases; the cœcum appeare normal in all; in only one was the ileo-cœca valve a little swollen. Peyer's glands, a well as the solitary follicles, presented no ap preciable change to the naked eye, not eve that special infiltration which occurs in th

first stage of typhoid. In only one case were the mesenteric glands swollen and enlarged, and this was in a person whose right lung contained suppurating tubercles. The kidneys were hyperæmic in two cases, fatty in two, and normal in one. The spine was not opened in any of the five cases.*

I am aware that five autopsies is a very insignificant number for the purpose of drawing deductions relative to the pathological anatomy of a disease, but from what has been shown one cannot fail to conclude that typhoid-malarial remittent fever is fundamentally different from typhoid proper, and that the lesions producing it in the system are the same as those which produce malarial pyrexias of brief duration.

As already stated, this form of fever may be confounded with typhoid, especially in its outset; even after the first week has elapsed, if the disease has been left to the unaided efforts of Nature, or if specific medication has not been properly employed, confusion between the two affections is inevitable. However, a good dose of quinine at the very beginning, after properly preparing the channels of absorption, suffices to assure the diagnosis. At the present day, when all recognize that the salts of quinine are useless and at times harmful in typhoid fever, the question of the differential diagnosis between the latter affection and another of malarial basis, which yields only to the use of those salts in large doses, is assuredly one of great importance—so much the more as by losing the first thirty-six or forty-eight hours the disease is continually becoming graver, and omission of specific treatment opportunely administered implies the death of the patient. The physician ought then to strive to recognize the nature of the disorder, questioning to this end all the sources of information, the previous history, a just appreciation of the symptoms, the cause of the morbid phenomena, and the results of the treatment pursued.

The patient's residence in a marshy locality, previous existence of intermittent paroxysms, and coincidence of malarial cachexia, are circumstances to be taken into great consideration in the diagnosis.

The fact of the temperature rising above 103° in the first twenty-four or thirty-six hours is of capital importance in favor of typhoid-malarial remittent fever, inasmuch as from the numerous observations of Professor Wunderlich, verified by many German practitioners, it results that any disease which presents a temperature of 104° or over on the first or second day is not typhoid; and also that it is not a case of this disease if by the evening of the fourth day the thermometer does not reach 103°. I have made the diagnosis of typhoid-malarial remittent fever, excluding typhoid, in spite of the large number of typhoid symptoms presented by the patient, only from finding, on the first or second day of the disease, the temperature at 104° or even at 103.2–103.6°, as is the general rule. The thermometer then is a great resource in the differential diagnosis of genuine typhoid fever and the pyrexia I am describing—a resource the more precious in that it is sometimes the only one which inspires us with confidence at the beginning, when the incidental history entirely fails us.

Among the symptoms of abdominal typhus, some are very rare in typhoid-malarial remittent fever, notably tympanites, diarrhœa, lenticular spots, and epistaxis. When I say that these symptoms are rare, I do not intend to offer them as secure sources of differential diagnosis, inasmuch as the rarity of a phenomenon does not imply its complete absence; the peculiar rose-spots termed typhoid, and regarded by many eminent practitioners as characteristic, have once presented themselves to my observation in a case of typhoid-malarial remittent, and were seen and analyzed by my pupils, some of whom, in spite of the positive indications of the thermometer, favored the diagnosis of typhoid, contrary to that which I had made. The progress of the disease, and the results of the treatment established, showed evidently that I was right; within ten days the patient had fully recovered, having taken large doses of quinine.

It may be seen, then, that the four symptoms which I offer as rare in the disease under consideration are auxiliary sources of diagnosis, which become of importance when

*In autopsies performed in the hospital, the intestinal canal is only opened when there is presumed to be some lesion of the parts contained therein, for there is never sufficient time for this particularly laborious part of the post-mortem examination.

connected with the history of the case, the results of thermometric investigation, and the progress of the affection, but which, taken separately, have only a partial and incomplete value. After the rational and methodical use of a dose of quinine, the situation so clears up that there rarely can remain the least doubt of the diagnosis in the physician's mind. Almost always under the action of the quinine salt, patients with typhoid-malarial remittent fever improve greatly in the first twenty-four hours; the fever sensibly diminishes; the evening exacerbation which appears is hardly over half a degree, at most under two degrees. Finally, in this fever recovery takes place in the second week, at times in the first, while in typhoid, even mild typhoid, convalescence begins much later.

I will say in conclusion that in the diagnosis of typhoid-malarial remittent fever the physician should pay attention to: First, the patient's customary residence, and the locality he was in when attacked by the illness: Second, whether he has had intermittent paroxysms, or presents symptoms of malarial cachexia: Third, if in the first forty-eight hours the temperature reaches 104°, if it exceeds or falls below 103°: Fourth, if in the array of symptoms there is epistaxis, abdominal tympanites, diarrhœa, or lenticular spots: Fifth, if, after the first doses of quinine, the patient having been well prepared for the absorption of this drug, sensible and lasting improvement occurs: Sixth, if convalescence becomes well marked within the first or second week.

The prognosis of typhoid-malarial remittent fever is generally favorable. The quicker the suitable medication is adopted, the more prompt and easy is recovery. Out of fifty-eight patients, observed in the hospital during nine years, only five died, and, as already stated, of these there was alcoholic cachexia in two, pulmonary tuberculosis in one; in all, the disease was of over three days' date when the patients were received at the hospital—one entered after the end of the first week, and had been bled copiously when he fell ill. Profuse diarrhœa is a very grave symptom, and concurs powerfully to a fatal termination; of the five deaths, four had diarrhœa. Excessive redness of the tongue is also a circumstance which aggravates the prognosis, not only because it reveals great irritation of the digestive system, but also because it renders quinine less effective.

In the treatment it is essential to attend simultaneously to the basis and to the form of the disease. Begin by removing every disorder which hinders the prompt absorption of quinine, such as gastric derangement, congestion of the liver or any other organ, great intensity of febrile reaction, etc. If the tongue appears furred, but moist, it is proper to give an emetic—ipecac preferably, because the patient's prostrated condition contra-indicates the use of antimony. If, besides being furred, the tongue is dry, make use of the neutral salts, in divided and continued doses, until large dejections appear—I prefer sulphate of magnesia, for its purgative action is more promptly manifested. If the tongue is dry and red at the tip and edges, without presenting the well marked furred condition, and if at the same time there is constipation (as is the rule), or when there is bilious diarrhœa, I resort to calomel, which is always of great use in the beginning of the disease, especially when there is delirium or when the hepatic congestion is very pronounced.

If the patient presents manifest signs of cerebral hyperæmia, such as a great tendency to coma from the commencement of the disease, with injected conjunctiva, great sensitiveness to light, intense headache, etc., the physician should not hesitate to have recourse to blood-letting, by means of leeches, even though the patient is prostrated; this should be effected at the verge of the anus if the disease is still in its first week, at the mastoid processes if it has gone beyond this period—for then, the tendency to adynamia being well marked, it is proper to draw but little blood and avoid any hæmorrhage from the leech-bites, and this can be easily done, thanks to the bony surfaces upon which effective compression can be made.

To combat the hyperæmia of the liver, a certain number of wet cups should be applied to the right hypochondrium, proportional to age, temperament, and other individual circumstances of the patient, as well as to the date of the disease. I have never met with any indication for general bleeding,

even in robust patients, seen by me in the first twenty-four hours of the affection.

When the febrile heat exceeds 104°, and the skin is very dry, neither of the two means I have just pointed out being indicated, I make use of a febrifuge and diaphoretic mixture as follows:

℞ Tincture digitalis, 2 grammes.
Tincture aconite, 2 grammes.
Tincture veratrum, 8 drops.
Syrup, 30 grammes.
Water, 100 grammes.

The patient takes this mixture in tablespoonful doses every hour; and as soon as sweating appears and heat diminishes I give the first dose of quinine (one gramme).

I follow no invariable formula in the use of quinine; I either give one gramme of the sulphate dissolved, as soon as the patient is prepared, and six hours after sixty centigrammes more; or I give two grammes in a mixture containing opium, in the form of diacodium syrup or laudanum; or three doses of sixty centigrammes each, one every three hours; and in cases of absolute intolerance of the stomach for the remedy, I resort to enemata. It is only in cases of very special irritability of the gastric and rectal mucous membrane that I prescribe the quinine salt in pill; on account of the little confidence I have in the pill form in cases where the patient's strength is reduced, and still more because some time ago, when I was called by a distinguished colleague to see a patient whom he was treating for ataxo-adynamic pernicious fever, I happened to find seven pills of sulphate of quinine, perfectly intact, in the stools produced by a purgative enema.

Besides the quinine salt which constitutes the basis of the treatment, and to which I add at times the valerianate of the same base, I prescribe for my patients suffering from typhoid-malarial remittent fever an antispasmodic and stimulant mixture, and correct the typhoid symptoms present. If there is delirium, I prefer belladonna, hyoscyamus, musk, and cherry-laurel water; if there is great restlessness together with insomnia, opium and bromide of sodium; if there is great adynamia and the pulse is small, weak, and very frequent, I resort to the ammoniacal preparations (carbonate or muriate of ammonia) and valerian, sulphuric ether, cinchona, camphor, and canella; to these latter remedies, combined and given alternately with the quinine, I am accustomed to add a full-bodied wine. The formulæ I ordinarily make use of are as follows:

℞ Tincture valerian, 2 grammes.
Tincture cinchona, 2 grammes.
Sulphuric ether, 2 grammes.
Syrup orange-peel, 30 grammes.
Canella-water, 100 grammes.
One tablespoonful every two hours.

℞ Ammonia carbonate, 1 gramme.
Soft extract cinchona, 4 grammes.
Simple syrup, 30 grammes.
Linden-flower water (*Hydrolate de Tilleal*, Fr. Pharm.), 60 grammes.
Balm-water (*Hydrolate de Melisse*, Fr. Pharm.), 60 grammes.
One tablespoonful every two hours.

℞ Soft extract cinchona, 4 grammes.
Tincture valerian, 2 grammes.
Port wine, 100 grammes.
One tablespoonful every two hours.

℞ Ammonia carbonate, 1 gramme.
Tincture camphor, 2 grammes.
Syrup cloves, 30 grammes.
Valerian-water, 100 grammes.
One tablespoonful every two hours.

According to the special indications present, I add the various nervous stimulants, graduating the dose to the severity of the symptoms I wish to combat.

In cases where there is delirium or great drowsiness I apply blisters to the calves of the legs, and prescribe stimulant enemata, as powerful derivatives.

In the use of quinine I follow the same method I have advised in the treatment of other malarial pyrexias, viz., to maintain the first dose for two or three days, diminish gradually the subsequent doses, and keep up the minimum dose for three days; never suspend the treatment suddenly, even though the patient's improvement betoken speedy recovery.

(*To be continued.*)

LECTURES ON THE HISTORY OF MEDICINE.

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 143.*]

For a long time the Italian universities held the first rank; next came the French,

and last the German, although all were well attended. The most famous were the medical faculties of Bologna, Pisa, Padua; then Paris, Montpellier, and finally Basle.

A little of what concerned the student life of this period may not be amiss. The students chose the rector and officers of the universities, sometimes even the teachers, and assisted in determining the curriculum of study, the execution of which they watched. In some of the Scotch universities even now the students choose the rector.

The students were divided, usually according to country, into bodies denominated "*nations*" (some having special seals), which were the parents of the present student corps in German universities. Certain representatives, known as vice-rectors, were chosen from each of these corps and constituted a so-called college of rectors which negotiated with the officials of the State, and possessed a power that was preserved until the end of the sixteenth century.

The poorer class of students passed from one school to another, supporting themselves by singing, begging, or stealing, and were sometimes guilty of great barbarities. The younger scholars, called "Schützen," were compelled to perform most menial duties for their older comrades, the "Bacchanten"—much like the system of fagging still in vogue in English grammar-schools; and when the bacchantes were admitted to the university proper they were required to pass through an initiation or hazing which eclipsed anything known in these days; indeed the antiquity of fagging may be traced back even to the philosophic schools of Athens. The habits of the traveling scholars led many of them into dissolute and vicious ways, though some attained respectable positions, possibly even eminence. The students who were better situated financially, for the most part entered the Italian universities.

Already mention has been made of the enormous number of students congregated during this age in Bologna and in Naples. In the small university of Wettenburg there were in 1520 only about 600 students; in Erfurt 300, and this number dwindled two years later to fifteen; in 1500 Leipzig had 400 students; at the same time there were about 7,000 in the University of Vienna. Students and teachers migrated from one place to another, and faculties were constantly changing. Great teachers were received with great ceremony. Bitter struggles and disputes between teachers sometimes occurred; it is related of Pistorius, who died in 1523, and Pollich, deceased in 1513, that they conceived a violent enmity toward each other because of antagonistic views relative to the epidemic or contagious character of syphilis, and both ultimately left Leipzig for other schools.

Some curious customs prevailed. In teaching anatomy, while the learned teachers explained the parts as exposed, the dissections were left to barbers as being unworthy of an educated medical gentleman. While the cadavers were mainly the corpses of executed criminals, it was thought that before and after each special dissection religious ceremonies were appropriate, and such were often held; it was also believed that all who came in contact with such a corpse would be made disreputable unless it were itself first made reputable; hence the professors first read aloud a decree to that effect from the magistrate, and then, by order of the senate of the faculty, stamped upon the breast of the corpse the seal of the university. The body was next carried into the anatomical hall, and the cover of the box in which it had been transported was returned to the executioner, who remained at some distance for this purpose. If the corpse was one that had been decapitated, during these solemn ceremonies the head was placed between its legs. Finally an entertainment with music, often furnished by itinerant actors, was given. But this folly was gradually discontinued, and by the second half of the sixteenth century public dissection was performed without recourse to such mummeries. The price of skeletons in those days was high; the University of Hiedelberg in 1669 paid $72 for one.

The practitioners of the sixteenth century were often quite as roving as the students and professors, though those who held positions as State physicians were bound by contract to a fixed residence for a certain time. In 1519 the State physician of Heilbronn received a salary of $21 per year and his firewood, but could not leave the city over night without permission of the burgomaster.

Medical attendants of the King of Spain were required to kneel down when they felt the King's pulse. There were few physicians who acquired wealth, although Fabricius ab Aquapendente left a fortune of 200,000 ducats.

With the approach of the seventeenth century there was evident improvement in both the social and mental status of medical men. While political humiliation and exhaustion were everywhere noted, in the field of literature it was evident that the line had advanced. What may have been the effect of thirty years of religious war, with other political struggles carried on under the hypocritical cloak of religion, may be imagined if not fully described; the devastation of whole countries by disease and notably by the plague, the poverty and hunger consequent upon the ravages of perpetual war (it is stated that even so late as 1792 there were still in Saxony 535 wasted and extinct villages), to say nothing of the barbarity and immorality resulting therefrom—all combined to make the early part of the seventeenth century a most mournful epoch. It is not strange that, with poverty, superstition and great rudeness of manners prevailed, or that trials for witchcraft and persecutions by the Jesuit Inquisition were common. That any advance should have been made under such circumstances, speaks well for the progress of the human mind. That this advance was slight in Germany and central Europe is not strange, though other countries were able to quietly enlarge their scientific borders. Now it was that England, Italy, and the Netherlands, which took but little part in the warlike struggles of the century, acquired leadership in medicine, and were seconded by the French. In Great Britain, science had been fostered by various kings, and particularly by Charles II., who professed to be something of a chemist; in fact an epidemic of scientific interest fell upon the English court.

The seventeenth century, in contrast to the idealistic sixteenth, witnessed the advent of modern realism in almost all departments of thought. Medicine furnished the first example in what we are accustomed to-day to speak of as the exact method; hence the century is of great importance, in that physicists and chemists began to be original instead of mere followers of the past. The most notable feature of medicine was the promulgation of three medical systems: the pietistically colored Paracelsism of Van Helmont; the chemical system of Sylvius; and the iatro chemical system of the physicist and mechanician Borelli. This period is, moreover, illumined by the life of one great practitioner, whose name will be imperishable in the history of our art—namely, Sydenham.

The principal tendency of the time was toward skepticism, which had begun in the preceding century with Montaigne, and was continued by Charron under the patronage of Queen Marguerite of Navarre; it was the fundamental idea of Pierre Bayle, the author of the great dictionary. Opposed thereto was the supernatural philosophy, or the theosophic, cabalistic, or mystic. The leading exponent of the latter was Boehme, who was a business colleague of the celebrated "Meistersinger" Hans Sachs in Germany, and of Blaise Pascal and his contemporary Malebranche in France. The doctrine of Lord Bacon (1561–1626), Baron Verulam, a man who showed himself as exalted in mind as he was mean in personal traits, was of great importance. Bacon is a landmark in history as the defender and eulogist of modern realism, *i. e.*, of inductive philosophy. While personally contributing but little to the advance of science, he taught a great method; as Gruen says, he was the philosopher of patents and profit; he recognized the compass, the art of printing, and gunpowder, as great inventions, but placed little value on the discovery of Copernicus, having little comprehension of mathematics. Hobbes and Locke went further into realistic philosophy, and the latter was an exponent later of pure empiricism.

In the seventeenth century, also, zoölogy and botany were largely extended. In it (1637 to 1680) lived Swammerdam, famous as a naturalist, physiologist, linguist, poet, and savant; there were others, also, whose names are better known in the history of collateral science than in medicine, and who left conclusive demonstrations in accordance with their theories and made daily use of the microscope, simple as it then was. The term "cell" had been introduced by Hooke in 1667, and Malpighi and Grew were the founders of the cell doctrine. The astronomical

laws discovered by Copernicus changed the course of the world's thought; and now appeared the brilliant Kepler (1571 to 1630); and Galileo (1564 to 1642), the defender of the Copernican system and the persecuted discoverer of the law of falling bodies, of the thermometer, the telescope, and the movements of Jupiter; also Sir Isaac Newton (1642–1727), whose discovery of the laws of gravitation in 1665 marked an era in the history of science. This century too gave birth to Römer, who in 1675 calculated the velocity of light; Huyghens (1627–1693), who discovered the polarization of light and the satellites of Saturn; James Gregory, who in 1663 made a reflecting telescope with a metallic concave mirror; Torricelli, who in 1643 measured the weight of the air; Gascoigne who invented the micrometer in 1639; and Napier, who invented logarithms in 1700.

Now chemistry, having ceased to be alchemy, began to don the dignity of a science *per se*, and it may be claimed that medicine derived no slight benefit therefrom. Scientific societies and journals rose at this period, and were all of good service to medicine in their way. The church scented danger to the faith in everything which related to natural science, and founded certain secret associations, especially in Italy; the Accademia Degli Lyncei, so called from its seal which bore the image of a fox or lynx, founded in Rome in 1603, was one of these. Counter societies, or rather societies with opposite purposes, were also started, and the original and private so-called Invisible Society, which was originated mainly by Milton in 1645, and remodeled by Charles II. in 1662, is now the flourishing Royal Society. In France the Academy was founded in 1665 by Colbert, but developed its first real activity thirty-five years later.

Those who to-day are so familiar with the course of the circulation of the blood through the arteries and veins, find it difficult to understand how the recognition of this phenomenon could have been so long delayed; it seems so simple, yet to the ancients it was perfectly incomprehensible! Although every one had recognized that blood would flow from an incision, few stopped to reason thereupon. From time immemorial it had been supposed that the veins had their origin in the liver and were the only vessels which contained blood, since the arteries were always found empty after death; the latter were held to contain only air or spirit. The circulation was supposed to leave and return to the liver through the venous canals by undulating movements similar to those of the waves of the ocean; and this was the doctrine of the Asclepiadæ, and probably of Erasistratus. Galen modified this view by showing that the arteries contained blood; he knew it was poured into the right cavities of the heart by the great veins, but he believed that only a small quantity passed from the right ventricle into the lungs, and that the major portion reached the left ventricle by passing through pores in the inner ventricular septum. This opinion was uncontested until the middle of the sixteenth century.

Then the theologian Michael Servetus, who, in 1553, perished as the victim of Calvin's jealousy, denied the passage of the blood through this septum, contending it was returned from the lungs to the left side of the heart by the pulmonary veins. This was a happy thought, and a great step towards the truth. Soon after, Columbus demonstrated anatomically that the conjecture of Servetus was plausible, by showing the function and real use of the valves of the heart. Cesalpinus came still nearer to the truth, and explained, as did Columbus, the course of the circulation through the lungs, but he opined that blood and vital spirits passed from the arteries into the veins during sleep, because at that time there is swelling of the latter and diminution of the pulse. Valves in the veins were known, and it had been shown that ligature of an artery in the living animal stopped the flow below it, while if a vein were tied there was shrinkage above the ligature and swelling below it. Such was the state of science at the beginning of the seventeenth century; there remained practically but one step to take, to find the true course of the blood.

William Harvey was born in Folkestone, Kent, in 1578, and died in London, 1637. He first studied at Cambridge, entering at the age of fifteen; subsequently traveled in France, Germany, and Italy, remaining in Padua from 1599 to 1602 in order to hear the lectures of Fabricius ab Aquapendente.

With the title of "Doctor" he returned and settled in London and soon became a member of the College of Medicine, of which he was made a regent in 1613; in time he became physician to James I., and, on the demise of this sovereign, to Charles I.; to the latter he dedicated his chief work. During the civil war he was driven from place to place and finally to Oxford, where he surrendered himself to the Parliamentary troops, after which he again resided in London with his brothers, who had become rich. Modesty led him to decline the high distinction of President of the College of Physicians, and he lived a quiet and retired life, occupied with his studies and, in his later years, investigations in mathematics. Soon after 1613 he began through his lectures to make known the doctrine of the circulation of the blood; but he did not publish the results of his researches until 1628, after submitting them to fifteen years of proofs and counter-proofs of every kind. So bitter was the opposition of his contemporaries to the new doctrine that he at one time lost a part of his practice, and was even held to be demented.—It is characteristic of the fate of new truths, as well as of that age of dominant authority, that his first publication "Concerning the Motions of the Heart and the Blood" was unable to pass censorship in England, and therefore appeared in a foreign country (Frankfort, in 1628) when he was fifty years old; but his second treatise on the same subject, in reply to Riolan, a professor in the faculty of Paris, was published in Cambridge in 1649.

"So much care and circumspection in search for truth, so much modesty and firmness in its demonstration, so much clearness and method in the development of his ideas," says Renouard, "should have prepossessed every one in favor of the theory of Harvey; but on the contrary it caused a general stupefaction in the medical world, and gave rise to great opposition."

This theory, which to-day appears so natural that we conceive with difficulty why it was not sooner discovered, was nothing less than a revolution in physiology; it excited a tremendous controversy that continued more than twenty-five years, and in which mingled every one possessed of any pretension to knowledge of anatomy or physiology; even naturalists and philosophers took part in the dispute. René Descartes was the first to declare in its favor, and to support it by experiment; John Walæus (Jan de Wale), the celebrated professor of anatomy in the University of Leyden, confirmed it by new observations; finally Plempius, of Louvaine, for a time one of the most fiery of opponents, succumbed to the truth, and in 1652 passed publicly to the ranks of Harvey's followers—no small triumph!

During these long debates Harvey remained always dignified and firm, although the early attacks rendered him unduly sensitive regarding others which he anticipated. About his only answer to the arguments adduced against him, was to add new proofs and new experiments to those already published. The only one of his adversaries who obtained a direct response was Riolan, who possessed immense influence among his contemporaries as a man of attainments; Riolan combated with equal violence and obstinacy the other great discovery of the age, viz., the circulation of the lymph. Harvey ultimately, however, had the satisfaction of seeing his theory universally adopted. But his services were not limited to this one discovery. He made most interesting observations on generation, both in man and in animals; on midwifery; and on the structure and diseases of the uterus.

The bond of union and intermediary system between the arteries and veins, so very essential, yet up to this time unknown, was discovered by the great Malpighi, who was born in 1628 near Bologna, became professor in its university, and discovered in the lungs and mesentery of frogs, in 1661, the capillary circulation. He first described the corpuscles of the blood in 1665; also discovered the lung cells, as well as the cutaneous glands, certain portions of the kidney, and the pigmentary layer of the skin, named after him (*rete Malpighi*), which later furnished the first explanation of the difference of color in different races.

In 1690 Leeuwenhoek (1632–1723), who had been making observations on the larvæ of frogs and other small animals, was able to see with his improved microscope the movements of the blood in the small vessels, and gave important testimony of his observations. In 1687 Cowper saw the passage of the arterial

into the venous current in the mesentery of a cat. The capillary connection between the two vascular systems was first demonstrated by Marchetti, but was best shown by Ruysch (1638 to 1731), professor at Amsterdam, the famous inventor of minute injections, who greatly advanced anatomy by the formation of collections, one of which was brought into Russia by Peter the Great at an expense of about $75,000.—The Russian transporters of the collection, however, drank the alcohol in which many of the preparations were preserved, and a portion of the specimens was thus ruined.

Further illustration and amplification of Harvey's views came from various sources; the last, perhaps, from Nicholaus Steno (1638 to 1686), who was first a professor in Copenhagen, then a bishop and peripatetic converter of heretics. Steno first proved the heart is a muscle that contracts actively and expels the blood. The duct that bears his name was discovered during his residence in Leyden or at Amsterdam. His name is written also "Stenson."

While ancient anatomists were able to describe in a general way the form of the lungs, their location, consistency, the ring-like structure of the trachea, and the first division of the bronchi, they did not go farther, but blindly accepted the prevalent theory that the bronchial tubes anastomosed with the terminal pulmonary veins, and that in this way atmospheric fluid was conveyed from the respiratory organs into the heart. On such vague and erroneous data was constructed the theory that the air was drawn into the lungs by the heat of the heart, which was the reservoir of the vital spirits; that in penetrating through the smaller tubes it was rarefied, its thinnest part passing into the heart, where it served as material for the formation of the vital spirit, its grosser part being exhaled. In other words, respiration was supposed to have two purposes: one to refresh the lungs, which, being porous and inflammable, would otherwise take fire from the heart or focus of animal heat; the other to furnish the pneuma, or ether, which was employed by the heart in the formation of animal spirits. Harvey's discovery upset all this, in great measure.

Next it was shown that pulmonary veins carried nothing to the heart except blood. And now, during this Reform Period, the purpose of the movements of the chest was better studied, for Borelli, Helvetius and Haller made many experiments, as the result of which it was determined that during inspiration the thorax is enlarged in all directions, and during expiration partly collapsed by relaxation of muscles, and that there never is any empty space between the lungs and the sides of the chest; further, that air is drawn into the chest by the tendency of all gaseous fluids to maintain an equilibrium, or, in other words, because Nature abhors a vacuum. This being settled, various pneumatic theories were adopted and abandoned, all of which had subsequently to give way before a knowledge of what really occurs. The truth was conceived of by Mayow in 1668. It had been noticed that blood which appeared black in issuing from the veins, became red in contact with the air, and direct observation proved a similar change of color to take place during its passage from the pulmonary veins during life. Goodwin, opening the thorax of a frog, was the first to see this, and Hessenfratz filled a silk bladder with venous blood, and, plunging it into an atmosphere of oxygen, saw the blood change from black to red. In this way and by the later labors of Bichat and Lavoisier were clearly established the mechanism and the purpose of the function of respiration.

The discovery of the lymphatic vessels and their purpose was scarcely less remarkable than that of the circulation, though marked by less *eclat* because it was not the work of one man but a matter of slow development. Herophilus and Erasistratus had seen white vessels connected with the lymph nodes in the mesentery of animals, and supposed them to be arteries full of air. Galen disputed this, for he believed the intestinal chyle was carried by the veins of the mesentery into the liver. In 1563 Eustachius described the thoracic duct in the horse. In 1622 Aselli professor of anatomy at Milan, discovered the lacteal vessels in a dog which had been killed immediately after partaking of food having pricked one of these by mistake, he saw a white fluid issue from it. Repeating the experiment, he became certain the white threads were vessels which drew the chyle

from the intestines. He observed the valves with which they are supplied, and supposed these vessels all met in the pancreas and continued on into the liver. In 1647 Pecquet, while still a student at Montpellier, discovered the lymph reservoir, or *receptaculum chyli*, and the canal which leads from it (the thoracic duct), which he followed to its termination in the left subclavian vein. Having ligated the duct, he saw it swell below and become empty above the ligature. He studied the courses of the lacteals, and convinced himself that they all entered into the common reservoir. This discovery gave the last blow to the ancient theory which attributed to the liver the function of blood-making, and confirmed the doctrine of Harvey.—Strangely enough, the latter united with Riolan in opposing the discovery of Pecquet and denying its significance. From this time the lymphatic vessels and glands became objects of common interest and were investigated by many anatomists—by Bartholin, Ruysch, the Hunters, Hewson, and above all by Mascagni, who was the first to give a graphic description of the whole lymphatic apparatus.

The ancients confounded under the name "neuron" nerves, tendons, ligaments, and membranes; even Aristotle regarded the brain as an inert mass devoid of sensation, and supposed the nerves to originate in the heart. Rufus of Ephesus remarked that Herophilus distinguished three sorts of nerves, the first serving for sensation and motion and proceeding from the brain and spinal marrow, the second and third serving to unite bones and muscles. Galen also shared in this error, but nevertheless described the brain membranes and the difference between white and gray matter; he supposed the cerebrum to be the seat of the soul and origin of sensory nerves, and that the cerebellum gave rise to nerves of motion; the pulsation of the cerebrum exposed was held to be a sort of brain respiration. Galen came very near recognizing the distinction between nerves and tendons, but nevertheless confused them. The anatomists of the sixteenth century described certain portions of the nervous system with more exactness than did Galen, but not with such positiveness as to prevent Cesalpinus from renewing the Aristotelian theory that the heart was the origin of sensation and the seat of the soul. Nearly two centuries later Baglivi advanced a theory which referred vital movements to the heart and the dura mater.

The progress which accrued to comparative anatomy and physiology, and the experiments which were made on animals, during this period, shed a great deal of light upon the nervous system. The researches of Vieussens, Haller, Meckel, Vicq d'Azyr, Scarpa, Soemmerring, and others, had already rendered it manifest that the brain was the organ of sensation and voluntary motion; and Bichat had proposed to divide the nervous system into cerebro-spinal and sympathetic branches.

Now, too, Kepler discovered that the crystalline lens was not the seat of vision, as had been supposed, but that its function, like that of other lenses, is the refraction of light. He observed that the image of objects is depicted upon the retina, and (with Scheiner) demonstrated that the expansion of the optic nerve in the retina is the essential part in the organ of sight. Obviously, also, interest in the anatomy of the eye, which these observations everywhere stimulated, was in a great measure aided by the researches of Newton on light and color.

About this time, too, Casserius and others studied the auditory apparatus and described the ossicles, the small muscles of the internal ear, and the semicircular canals; they even followed the acoustic nerve. By the researches of a number of French and Italian anatomists it was likewise established that the true seat of hearing lies within the internal ear, the external parts being merely of assistance in conducting sound.

Thomas Willis was one of the first to consider the brain as an assemblage of organs, and to assign special functions to certain of its divisions; he thus became a pioneer in cerebral localization, although most of his conjectures were inaccurate or fanciful. The workings of the brain were also studied by Pinel and others, who observed that in certain conditions of mania or partial insanity some of the mental faculties, such as memory, judgment, imagination, or will, were abolished or suspended, while other faculties were preserved; hence it was inferred that each faculty must have its own seat. The views

thus enunciated were carried to an absurd degree by Gall, and later by Spurzheim, who made an entirely new classification, believing the cranium to be molded in a reasonably exact manner upon the brain, and that by inspection of the exterior the character of a given individual could be read. They thus founded the pseudo-science denominated phrenology, which we now know has practically nothing to justify itself.

About the middle of the seventeenth century, Glisson (a professor in the University of Oxford) recognized a property pertaining to all living tissue, which he termed irritability, and which he regarded as sufficient cause for all the phenomena of life; he enunciated certain views that in times past have had an important bearing upon the pathology of disease, but which were forgotten for sixty years or more until revamped by the Dutch anatomist Goerter. It was the latter, with the great Haller, who, by a series of very ingenious experiments, elevated the suppositions of Glisson to the dignity of demonstrated facts. In 1747 the results of Haller's researches were published under the modest title of "First Lines in Physiology;" the author was, in fact, the great exponent of the doctrine of irritability in neuro physiology, and for this deserves to be remembered wherever the history of our art is spoken of. This theory of irritability was applied to pathology by Fabre, of Paris, who refuted the mechanical theory of Boerhaave on inflammation, proving that the latter proceeds, not from obstruction of the capillaries, but from exaltation of their irritability. It was also applied in many ways by Bichat, who enjoyed a brief though memorable career. The theory of irritability, along with the truths established by John Hunter in his researches on the blood, made a very distinct advance in the physiological knowledge of the seventeenth century, and the researches of those who contributed so much to its advance are well worthy of study even at the present day. In this line of investigation should perhaps also be mentioned the names of Winslow, Albinus, the two Monroes, besides Vicq d'Azyr, and others already named.

I have so far discussed the development of theories and researches of individuals. During the earlier portion of the seventeenth century there happened something which gave to materia medica a remedy so valuable, and which attracted such widespread attention, that it deserves special mention—I refer to the discovery of that great febrifuge, Peruvian bark. Malarial fevers had been known as early as the time of Hippocrates, and were universally treated largely with purgatives, sometimes with venesections. There had been no notable improvement in the management of pyrexias of this class down to 1638, when the Countess of Cinchon, wife of the Viceroy of Peru, became a prey to a fever which nothing could remove. It is said a Spaniard learned from the natives the secret of the bark, and advised its employment, whereby the Countess recovered her health.—This is the generally received account, although it has been widely discredited, and Humboldt expresses decided doubts as to the source whence the first knowledge of the bark was derived. Be this as it may, however, it is certain that in 1639 the Countess, and her physician DeVega, imported into Spain a quantity of ground Peruvian bark, and distributed it to various persons, though it was not made an article of general commerce until ten years later, when it was exploited by the Jesuits, who had received a large supply; in Spain it was known as the "Countess's powder," and in Italy as "Jesuit" or "Cardinal" powder. Being very high-priced, it was soon so sophisticated as to be quite unreliable. Condamine, the botanist, having been sent to America for other purposes, determined the botanical position of the tree and described several species of cinchona, one of which is known by his name. To him is due the generic title bestowed in acknowledgment of the services rendered by the Countess who introduced the bark into Europe. Many vain attempts were made to determine the chemical composition of the powder, and it remained for two French chemists to isolate and separate its most important alkaloid. The first who wrote upon the therapy of cinchona was Barba, a Spanish physician, whose work was printed in Seville in 1642. After its introduction into England, Peruvian bark fell into disrepute, owing to improper administration whereby death was caused in certain instances; and it was this latter fact that

instigated Sydenham to investigate it still more accurately. There has never been introduced into medicine any one drug which has proved itself so generally valuable and so widely effective, as cinchona and its products.

As little progress had been made in obstetrics as in other branches of applied medicine or surgery. The custom of employing midwives was general, and these for the most part were ignorant and filthy old women, slaves of routine procedures that had obtained from time immemorial. Educated accoucheurs were called only in extraordinary cases; but with progress the prejudice which excluded educated physicians from the practice of midwifery gradually gave way, and there was opened for obstetrics a new era. In the beginning of the seventeenth century the initiative was taken by Louise Bourgeois, the *sage femme* of Marie de Medicis, who in 1626 published a collection of observations concerning sterility, abortion, fecundity, accouchment, and diseases of women and children generally; it embodied several distinctly new ideas. A little later (in 1668), Mauriceau, of Paris, chief accoucheur to the Hôtel Dieu, published his treatise on diseases of pregnancy and childbirth, which was translated into all the languages of Europe and became a powerful agent for good, not alone that it represented an advance in knowledge, but it stimulated such rivals and successors as Devanter, Peu, Paul Portal and Delamotte to further research. About this time the Chamberlains, an English family devoted to the practice of midwifery, invented an instrument to facilitate the extraction of the fœtal head when arrested, and one of them went to Paris, and, failing of success there, passed on to Holland, where he sold his secret to two Dutch practitioners, who kept it only too faithfully. In 1721, Palfyn, a surgeon of Ghent, while seeking to fathom the device of the Chamberlains, conceived a *tire tête* (literally a head drawer) composed of two steel spoons, and hastened to publish an account thereof—a praiseworthy act, whereby he merits distinction as the inventor of the forceps. As modified by Smellie in England, and Levret in France, the obstetrical forceps ranks among the most useful discoveries of modern surgery, and, although not in common use until about a century ago, it may be said that the invention has been the means of saving the lives of countless women and children.

Medical jurisprudence also seems to have had its beginning during this century. It had long been the practice to summon physicians to court in order to enlighten the judiciary upon questions demanding particular knowledge in physics and medicine; indeed, the practice began under the first Christian emperors, and owes its origin to ecclesiastical authority. Charlemagne confirmed in this regard what Justinian was perhaps the first to ordain. The tribunal of Châtelet, according to Renouard, appears to have been the first which comprehended the great utility of consultation with expert physicians; an edict of Philip le Bel, in 1311, qualified Master John Potard with the title "Sworn Surgeon of Châtelet;" and the constitution promulgated by Charles V., in 1552, gave great importance to medical jurisprudence, as it treated in detail of infanticide, wounds, poisons, abortion, and other such crimes. At the beginning of the seventeenth century Fidelis collated all that had been written on this subject, and thus published the first special treatise on legal medicine.

Some writers claim to have discovered traces of clinical teaching in the history of Arabian universities, but, as Renouard says, the presence of a few pupils during visitations and consultations no more constituted real clinical teaching than the practice adopted by some practitioners of ancient Rome of being ever surrounded by a group of spectators whom they dignified with the title of disciples. The first attempt at real clinical teaching appears to have been in the hospital of St. Francis, in Padua, in 1558, by Botoni and Oddi. About the beginning of the seventeenth century Otto de Heurne, of the University of Leyden, introduced bedside instruction, which was continued by Le Boe, sometimes called Sylvius, with the result of drawing large crowds of students to Leyden from 1658 to 1672. Notwithstanding the success attained, the practice was neglected by the successors of Sylvius until renewed by Boerhaave, who, invested with several functions at the University of Leyden, also occupied the chair of medicine. So great was the

renown of Boerhaave that, despite the poverty of the resources of the Leyden hospital, people came to consult him from the most distant countries, and he was a correspondent of several crowned heads, even of the Pope, although himself a Protestant. During his life and long afterward he exerted an immense influence in medicine, and while, perhaps, inferior in genius to some of his contemporaries, he had a wider reputation, and his doctrines prevailed longer. The great success of his clinics decided in favor of this method of teaching, and in 1715 the Pope established in Rome a similar institution under the direction of the celebrated Lancisi. Soon Edinburgh, Vienna, Pavia and other universities followed suit, the first clinical chair in Paris being held by Corvisart, and the first in Vienna by Van Swieten. After the demise of Boerhaave, the school of Leyden rapidly declined, while those of Edinburgh and Vienna became rivals for first place. It is thus seen that after an interruption of more than 2,000 years clinical teaching was revived and became more brilliant than ever before.

I now propose to recount the methods and deeds of some of those concerned in the development of systems, so called, and make mention of the most prominent medical men in national and historical order. This will not prevent going back to philosophical conclusions or reflections upon the philosophy of the history of medicine, when it may seem wise so to digress.

First of the system of J. B. Van Helmont, which in its day was most highly regarded, and which seems to have been in some measure a rearrangement of the views of Paracelsus into a mystic and pietistic system based upon mechanical principles. Van Helmont was born in Brussels in 1578, and was so precocious that he entered the university of Louvain at an age which would have enabled him, had he so desired, to obtain the degree of Magister when only seventeen years old. He deemed the degree frivolous. He had studied mathematics, astronomy, philosophy, and astrology. Going now to the Jesuits, who at that time, even, taught magic, he soon became dissatisfied, and turned to the study of Stoical philosophy. Believing that the Capuchins (who were mere lascivious gluttons, and considered even washing unchristian) were the true Stoics, he sought to join this order, but ere long abandoned them and resumed his studies in law, botany, and medicine. For the latter Van Helmont had at first little respect, since his studies in this line did not enable him to rid himself of the itch. He soon again lapsed to the monastics, and came to the conclusion that wisdom, like the grace of God, was obtainable only by fasting, supplication, and poverty; accordingly he practiced medicine among the poor as a labor of love (having received his degree of Doctor in 1599). During his travels he became familiar with the writings of Paracelsus, which he studied zealously. Finally he settled down in Vilvorde, where he practiced medicine and chemistry until his death (in 1644).

Like most "systems," that of Van Helmont is valued only as an expression of the spirit of the age, since it embodied largely the pantheism of Paracelsus, merely cloaked with a more religious or monkish dress. He held that the general cause of disease was the fall of man; though there also figured a subsidiary cause which he denominated Archeus, a faculty of appetite seated in the spleen or in the stomach: thus dropsy was a hindrance of renal excretion by the enraged Archeus. Demons, witches and ghosts were included in Van Helmont's system as causes of disease. Indeed, the man seems to have been a second Paracelsus, lacking only in the dishonesty and bombast of the latter. He had no followers of any prominence, and the "system" soon lapsed into obscurity.

The Chemical or Iatro-chemical system was originated by Le Boe, commonly known as Sylvius (but who must not be confounded with the great anatomist of the same name). Le Boe was born in Hanau in 1614, studied in Paris, Leyden, and Basle, received his doctorate from the latter university at the age of twenty, and practiced in Switzerland with great success until 1660, when he accepted a professorship in Leyden; here he was distinguished for his eloquence, wealth, and sociability, as well as for the great number of pupils that were attracted by his clinical method of teaching. His system embraced a peculiar phantasy, being based upon the elements of chemistry, the new knowledge of

the circulation, the latest physiological teachings, and the old doctrine of the spirituous or innate heat of the heart, which he claimed to have felt with his finger. He asserted his theories were founded upon experience, but the truth is they were inaccurate deductions from experimental observations, many of which were wholly irrelevant. The majority of diseases, he taught, were produced by excess of acidity or alkalinity. For him the three great fluids of the body were the saliva, the pancreatic fluid, and the bile, while health consisted in the undisturbed performance in the body of the process of fermentation; and the saliva was supposed to give rise to hectic fevers, because such manifest exacerbation after eating. Stereotyped theory and equally stereotyped therapeutics gained for him, for a short time, a large following, but later raised numerous opponents who alleged that his system cost as many human lives as the whole thirty years' war. He died in 1672.

To the same iatro-chemical school is generally assigned Thomas Willis, born in Oxford, 1622 (died in 1675), who rendered great service to anatomy, especially to anatomy of the nervous system, although his teaching was disfigured by certain unsupported theories. Like Van Helmont, he had been destined for theology, but turned his attention to medicine. Ultimately he became professor of philosophy in the University of Oxford. He first described the so-called circle of Willis, whence its name; also ascribed diseases, especially those of the blood, to fermentation, in which the vital spirits played the chief part.— He accounted for hysteria, for instance, by the union of the spiritus with imperfectly purified blood.

(*To be continued.*)

AIDS TO PRESCRIBING.

It is strange that those convenient aids to prescribing and dispensing—gelatin capsules —are so often ignored. A moment of reflection will convince the most skeptical that the capsule is very easily dissolved—scarcely does it reach the stomach ere the lesser portion, which forms the cap, begins to swell and curl backwards upon itself, when, almost immediately, it releases the medicament in a form to be readily dissolved and assimilated.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., MARCH 25th, 1895.

Editorial.

THE LATE DOCTOR WORTHINGTON.

It is with deep regret that we are compelled to announce the death of Edward Dagge Worthington, M.D., M.A., F.R.C.S., which took place at Sherbrooke, Quebec, on Monday, February 25th last.

Doctor Worthington was the doyen of the medical profession in the Eastern Townships of Quebec, having been in actual practice there for more than fifty years. His reputation, however, was Provincial rather than local, and for many years he was recognized as the leading surgeon in the Lower Provinces.

Born in Ballinakill, Queen's County, Ireland, December 1st, 1820, two years later he came with his parents to Canada. In 1834 he was indentured for seven years as a medical student with that distinguished practitioner, the late James Douglass, of Quebec, but was released from his apprenticeship at the end of five years to enable him to accept an appointment as Assistant Surgeon to H. M. 56th Foot, then quartered in "Lower Canada," and subsequently (1845) was promoted to Staff Assistant Surgeon, serving with H. M. 68th Light Infantry. Later he resigned his commission to proceed to Edinburgh, where he attended lectures at the University, winning the gold medal in his year; he was in "auld Reekie" during the Burke and Hare trials and Snowball Riots, a graphic account of which appeared from his pen in THE MEDICAL AGE last year. He passed a most brilliant examination for the degree of Doctor of Medicine, which was bestowed upon him

by the College of St. Andrew's. Later he became a licentiate of the Royal College of Surgeons, and of the Faculty of Physicians and Surgeons of Glasgow. Upon his return to Canada he received the license of the Montreal Medical Board, and almost immediately located in Sherbrooke and entered upon active practice. In 1855 the University of Bishop's College conferred upon him *honoris causa* the degree of M.A., and in 1868 the University of McGill College granted him the degree *ad eundem* of C.M., M.D. For some years he was likewise one of the governors of the College of Physicians and Surgeons of Lower Canada. He was the first president of the St. Francis District Medical Association, and to his zeal, to a great extent, was due the organization of the Canadian Medical Association.

Doctor Worthington was the first surgeon in Canada to perform a capital operation under an anæsthetic—the first to use both ether and chloroform. He also manifested deep interest in military affairs, and in 1861 was named surgeon to the 53d Battalion, and later promoted to Surgeon-Major, which rank he retained upon retirement. As a physician and surgeon he enjoyed the fullest confidence of the community; for over thirty years he had nearly all the surgical practice in the "Eastern Townships." He moreover had the full confidence of his medical *confrères*, who frequently sent for him from long distances.

As the physician and friend of the poor, Doctor Worthington was preëminently distinguished. He was one of the kindest and most lovable of men, and his traits of character were such that they could not but endear him to a very wide circle of friends. The self-sacrificing devotion with which he gave his time and abilities to the practice of his profession, regardless of pecuniary emoluments, was deemed worthy of public recognition, and he on several occasions received substantial marks of public favor, among others a solid silver tea service presented by the people and the medical profession of the Eastern Townships, as an evidence of their appreciation of his efforts to succor the impecunious and afflicted. On another occasion he was the recipient of an elegant gold watch and chain, tendered to mark the appreciation of his energetic and successful efforts to stamp out an epidemic of that most loathsome of diseases, the smallpox.

In 1837 Doctor Worthington served as a private in Captain Le Mesurier's company of the Quebec regiment of Volunteer Light Infantry; he likewise saw active service in a professional capacity in both Fenian raids.

He was a member of the Church of England; in politics a Conservative.

In 1845 he was united in marriage to Fanny Louisa Smith, oldest daughter of the late Honorable Hollis Smith, the first member elected to the Legislative Council for the Division of Wellington. Mrs. Worthington died in April, 1887, and of the eight children that blessed this union, five survive, one of whom follows the professional footsteps of his father.

Doctor Worthington frequently contributed to medical periodicals, notably the *Montreal Medical Journal*, and wielded a most facile pen: his descriptions were always pointed and terse, never marked by space-writing or verbosity; as an author he had few equals. During 1894 he was a frequent contributor to THE MEDICAL AGE, and his most interesting "Reminiscences" of medical study and practice of half a century ago excited the admiration of all who were fortunate enough to peruse them; they constituted exquisite bits of word-painting and quaint humor, and were widely copied, securing only the superlatives of favorable criticism. These sketches were penned at odd moments, during the intervals when he was free from suffering, for he had for some time been a helpless invalid; indeed, the last contribution, "Watson and Bell's Section," was written in bed.

As his physical condition became worse, even the delights of authorship were denied —"one more pleasure taken away," he wrote the editor of the AGE, "and I now look forward almost with eagerness to the moment when I shall lay down the burden of life." His death was not unexpected—it was understood by himself and family that the end might come at any moment. He was, as he often remarked, "weary, weary, beyond expression." Happily he was spared great suffering, and no little child in its mother's arms ever went to sleep with greater peace and restfulness than that which marked the

passing of this grand and noble character "beyond the dark river."

He will be greatly missed, not alone by his family and by the friends made through THE MEDICAL AGE, but by the entire medical profession of Canada, of which he was so distinguished an ornament. Indeed, his whole life was intimately interwoven with the medical history of Canada, and was an integral part of the history of the Province of Quebec. It is the lot of few men to be so noble, so distinguished, so loved, and so missed.

NEW LIGHT ON COD-LIVER OIL.

Under this caption the *Chemist and Druggist* (London) reviews the chemistry of Cod-liver Oil as studied by F. Peckel Moeller.

The practical results of Moeller's researches have been incorporated in a new method of preparing the oil, which consists in excluding free oxygen during the process of rendering and bottling. It is also shown that the removal of stearine from the oil is a questionable proceeding.

Doctor Moeller reaches the conclusion that "the real value of Cod-liver Oil resides in the fatty acids contained in the form of glycerides," and that "obviously the great point is to preserve these acids absolutely unchanged."

Many of the time-honored traditions regarding Cod-liver Oil are shattered by Doctor Moeller. After remarking that it "occupies a very unique position, and substitutes for it are consequently becoming very numerous," he tells us why most of these substitutes fail and must continue to fail. He lays down as strongly as language or chemical data can be made, that "Cod-liver Oil is a food *sui generis;* that it has no active principle; and that in taking it it is a case of *all or none*"—a sentiment that is heartily re-echoed by the *Chemist and Druggist!*

ARGON.

At a meeting of the Royal Society in January last, Lord Rayleigh and Professor William Ramsay presented a paper announcing the demonstration of a new substance in the atmosphere, which they term Argon.

It had previously been shown by the former gentleman that nitrogen extracted from chemical compounds was about one-half of one per cent. lighter than that obtained from the atmosphere; hence he was led to study atmospheric gases under a number of different conditions, and the above-mentioned discovery was the result.

Argon is prepared by freeing air from oxygen through the medium of red-hot copper, residue being passed from a gas-holder to a combustion tube heated in a furnace (also containing copper) in order to remove all traces of oxygen; the issuing gas is now dried by passage over soda-lime and phosphorus pentoxide, then made to enter a combustion tube packed tightly with magnesium turnings, and heated to redness in a second furnace. Ultimately the Argon is transferred to a small gas-holder and caused to circulate through a series of tubes of copper, copper oxide, soda-lime, phosphorus pentoxide, and red-hot magnesium turnings, until freed from any possible contamination with oxygen, hydrogen, hydrocarbons, or nitrogen. It is preserved over mercury or over water saturated with itself.

Notably all attempts to combine Argon with other elements have so far failed. It is suspected, however, that it is not an element, but a compound, as it partakes of the nature of a monatic gas.

EDITORIAL NOTES.

A Lay by a Layman.—

Did you ever know a bill like a doctor's bill—
So easy to create and so difficult to kill?
Steady as the strokes from the hand of Fate,
Visit after visit doth the sum accumulate—
And the medico forgetteth not a solitary date.
Seldom doth he bring his bitter dope along,
But he gives the druggist orders to make it good and strong:
Something for the stomach, for the kidneys, lungs, and spleen,
With dynamite to touch them off, or nitro-*glycereen;*
"Aquæ fœniculi, ext. hæmatox. campech.,"
And other Latin epithets to rattle in your neck;
"Inf. gentianæ, tinct. card. co.,
Haust.!" What do you think of that, to make the liver go?
And many a time I've read it, though I don't know what it's for:
"Syr. limon., potass. citratis, tinct. ferri perchlor."

It fetches fancy prices, but the druggist has to pay
For what this language cost him when he learned it by the day;
Besides, there is the bric-a-brac it takes to ornament
His little store; and, worst of all, there is the awful rent.
But the medico comes, and silent as the day,
Without a word of settlement he takes himself away
The story he is telling has many chapters more,
And we'll never reach "Finis" till we reach the golden shore.
Drop, drop, drop, like the rain upon the pane—
He always says "Good-by," but he always comes again.
Here is how it goes—last week it happened twice
(I think we need Socrates to give us some advice):

"Baby's got the stomach-ache! O dear me!
Telephone quick—seven hundred ninety-three—
'Doctor! Doctor Blank! O, baby's got a fit!
Come this very minute! Whatever you're at, quit!" . . .
Poor ittie baby! There! Doctor'll soon be tummin',
Zen he'll div oo ittie pills for naughty old abdomen!
Sh-h-h!—there's a pet!—Go to seep! . . .
"Who's at the door?"—
"Doctor," says the maid.—"And what's the doctor for?"—
"Why, he says you called him up."—"O—I—did, but that was quite
A little while ago—and I had such a fright.
My feelings are like soda—they foam, but do not keep;
Baby *did* cry, but now—he's fast asleep."
Of course there'll have to be a small prescription—that's all.
(Forty-five cents. Two dollars for the call.)

If mamma has the toothache, papa the dumps,
Grandma the rheumatiz, or Tabby Tom the mumps,
No matter what the ache, or the pain, or malaise,
The first thing we see is the doctor in his chaise.
Then he has to come again to see how we're "getting on"—
And it all goes in the bill. So jogs the world along.

Every month we get a shock—chiefly on the second day—
For our doctor is a "regular" and wants his pay.

That's the way it goes. If I were in his shoes,
I might be an optimist; now I have the blues,
For every dividend I draw, this doctor has to share—
"'Tis money makes the mare go," but *he* owns the mare.

W. A. T.

The Use of Nuclein.—

Under "Some Clinical Notes on the Use of Nuclein," contributed to the *Therapeutic Gazette*, Doctor Frank W. Garber cites thirteen cases benefited by the exhibition of this remedy as prepared under the formula of Doctor Vaughan. Of these cases, ten were of tuberculosis, one of neurasthenia, one of follicular tonsillitis, and one of troublesome sinus with phlegmonous cellulitis induced by a sloughing tendon leading from the second finger high into the palm of the hand. Doctor Garber concludes from these experiments that he is "warranted in claiming we have in Nuclein an agent of value in incipient tuberculosis." Whether it is "positively curative" he is not yet in position to say, but adds "It seems true that by its early use it is possible to so build up patients as to give them a longer lease of life and very much more comfort. If the patient is in position to take advantage of favorable climatic conditions, I have great faith in the complete restoration to health by the use of Nuclein of a large number of persons who now die under the old methods of treatment."

Commercial Science.—

Recently the *British Medical Journal* presented a timely remonstrance against the growing tendency to prostitute progress in medical science to personal gain. It points out that "from time immemorial it has been the honorable tradition that every discovery made by a medical man, tending to the relief of suffering or the preservation of health, should be freely communicated to the world and placed at the disposal of the profession." The *Pharmaceutical Journal and Transactions* declares that Doctor Hans Aronson, of Charlottenburg, has recently made application in Great Britain for letters patent for a method of separating antitoxins from serum by means of metallic hydrates. This, it is urged, is both "unprofessional and contrary to public policy," and "government should be asked to consider whether protection in such a case would be justifiable."

Thyroid in Obesity.—

The rapid loss of body-weight attending the treatment of myxœdema with thyroid very naturally suggests the applicability of the same method in obesity. Doctors Charrin, Leichtenstern and Wendelstadt observed a manifest diminution of *embonpoint* in twenty-two of twenty-five obese subjects after a course with fresh sheep-thyroids. The good

ffects are ascribed to more active combus-ion of accumulated fat, rather than to the liuresis which is so marked a feature of the nitial stage of treatment. The actual wast-ng observed varied in individual cases from ne to five kilogrammes during the first week, nd from one to nine in the subsequent weeks.

"To Make White Crows or Ravens."—

In "The Young Ladies' School of Arts," y Mrs. Hannah Robertson, published in two olumes in Edinburgh in 1777, there appears n page 139 of the first volume the following stounding psycho-physiological information:

Rub with the fat of a white cat some crow's eggs—those newly laid are the best; let the eggs also be done over with the brains of said cat; afterwards set them to be hatched by a very white pullet, that has never hatched before. During the whole time she must be kept impervious to the sun and the place must be hung with white linen clothes, and the crows or ravens produced from these eggs will be white.

For Tapeworm.—

℞ Powdered pomegranate-root bark, 4 drachms.
Pumpkin seeds (fresh), ground, ½ drachm.
Ethereal extract of male-fern, 1 drachm.

Boil the pomegranate-root bark and pumpkin seeds in half a pint of water for fifteen minutes, strain and allow to cool, and then add half a drachm of normal liquid ergot.

Take the ethereal extract of male-fern, add to it two minims of croton oil, and rub up thoroughly with two drachms of powdered gum arabic; with this make an emulsion with the above decoction.

Ingest at one dose.

It is said this will remove the tapeworm within two hours.

"The University Founded by Franklin."—

Under this title Doctor J. Howe Adams in the *Peterson Magazine* for March gives a most interesting description of the rise, development and aims of the University of Pennsylvania. The paper is well worthy of perusal as forming a part of the history of a great commonwealth.

Demise of a Noted Alienist.—

Doctor Hack Tuke, of London, one of the foremost alienists and neurologists of the age, is dead. His demise leaves a large gap in the ranks of neurological specialists, that will not be easy to fill.

Items and News.

Old Age.—

During the past year, in the obituary column of one of the leading London papers, the deaths of 7,129 persons were announced. Of these it is stated that 998 had passed by ten years the age which the Psalmist said constitutes the span of human life. There were no fewer than five centenarians in the list—two men and three women. In the news columns of the same journal no fewer than thirty-five centenarians, in addition to the above five names, appeared. Ireland, and particularly County Cork, has furnished the most remarkable instances in the past year of persons having attained an age considerably beyond 100 years. In July there died near Middleton, County Cork, a widow whose age was vouched for as 115. At the time of her death she had a daughter living with her, aged 85. In the same neighborhood in September a man died at the age of 112. Another, who died at the age of 105, was at work upon his farm within six months of his decease. A woman who died in December, aged 110, had a vivid recollection of the landing of the French at Killala. On the 9th of January, 1894, at Manchester, the death took place of William Hampson, who claimed to be the Queen's oldest subject, and who had seen his 115th New Year's Day in 1894; he had as a boy heard John Wesley preach in Trinity Church, Salford. Two of his sons were killed in the Crimea, and four of his uncles fell on the field of Waterloo.—London Correspondence of *American Lancet.*

Suppression of Nostrum Traffic.—

In contrast with the efforts on the part of some members of the American Medical Association to exorcise certain salutary restrictions from the Code of Ethics are the numerous indications of a disposition on the part of the dental profession to elevate its standard both ethically and educationally. In a paper read some time ago before the First District Dental Society of the State of New York, Doctor E. C. Kirk, of Philadelphia, showed that a large number of nostrums recommended for the relief of various painful affections of the teeth and gums contained cocaine, despite emphatic assertion to the contrary. The danger of such preparations in unskilled hands is entirely too obvious to require extended comment. The *Dental Cosmos* notes editorially that a movement has been set on foot in Mississippi having for its object the prohibition by legislative enactment of the use of nostrums in connection

with the extraction or filling of teeth. The agitation is timely and should find indorsement and support wherever intelligence and honesty prevail over ignorance and quackery. The restrictions in the use of dangerous remedies or such as are not what they are pretended to be, should, however, not be limited to any one class, but should be extended to include all preparations the nature of whose composition is concealed.—*Medical News.*

Character.—

A man who fleeces the public, and thus injures the reputation of the profession, by charging fees farcically outrageous for inconsiderable operations, needs to be incontinently squelched.

The most successful physician is not he who has most patients and makes the most money, but he who most successfully relieves disease.

The best teacher is not necessarily he who talks the glibbest or who is most "popular," but he who helps his pupils to acquire the best and most accurate knowledge and who inspires them with enthusiasm for knowledge and for the relief of human ills.

In no way can we mold the future and make the world better for our children—freer from disease,—than by encouraging the formation of noble medical character by helping to office and by rewarding and consulting with those who are seeking to keep their characters pure and clean.—*Medical News.*

The Circus.—

The editor of a religious paper in Iowa gives the following reasons for his love for the circus:

"As we gaze at the lions, tigers, and monkeys, and think that nature made all of them, we are not so sure. And when we look at the beautiful young lady, with nothing on but a blue ribbon around her waist, with one leg pointing to six o'clock and the other to high noon, and think that nature made her too, just as she is except the ribbon, we begin to lean up to the circus. But when the brass band begins to play and the elephants go round, we rush in for a front seat to get in ahead of the ministers, who always wear stovepipe hats and won't sit down in front."

A Universal Language.—

Medical practitioners continue to worry themselves about this "fad;" only a certain proportion of those who advocate a universal language for the profession recognizing the fact that they are already assumed to possess a knowledge of a language which is practically universal. But the knowledge of Latin is more frequently theoretical than practical, and there seems to be a disinclination to master its intricacies. It may be suggested that English is well on the way to becoming the universal language, and that those who now practice it might do well to obtain a thorough knowledge of it. The result would be much more profitable on the whole than an imperfect acquaintance with several ancient and modern tongues.—*Pharmaceutical Journal and Transactions.*

The Rocking Chair as a Therapeutic Measure.—

Doctor Laine declares that by resorting to a slow and regular rocking motion after meals, gastro-intestinal peristalsis is stimulated, and persons whose digestive functions are habitually sluggish thereby experience marked relief. He especially recommends this measure in atony of the stomach.

The rocking chair should be so constructed as to be set in motion without much effort, and the inclination of the axis should be sufficient to place the patient in an almost horizontal position.—*The Lancet.*

Death of an Aged Woman.—

"Aunt" Eunice Conrad, whose maiden name was Mace, died at her home near Cedarville, Gilmore County, West Virginia, March 4th, in her one hundred and twentieth year. She was born August 4th, 1775, in Pendleton County, of Scotch parentage; and was married in 1805 to Jacob Conrad, afterwards a soldier of the war of 1812. She had full use of her mental faculties up to the last. Her youngest son, with whom she resided, is sixty-five years of age.

The New Woman.—

Physiologically, the new woman is a vast improvement over the other woman. She is not a delicate, pallid, emotional, unknown quantity. She is a creature full of energy and decision. She takes systematic stock of her vital capital and endeavors in every way to increase it. She lives in a hygienic, regular fashion, eats three hearty meals a day, is fond of athletics, and keeps in touch with the world mentally and physically.

Tit for Tat.—

In the *Journal of the American Medical Association* Doctor Keiper criticises the patronizing tone of papers written by certain specialists on the text, "What the general practitioner should know about" the particular disease which they (the specialists)

treat. He proposes that some one should write a volume or two on "What the specialists should know of general practice."—*Medical Times.*

Honest Fame.—

Jinks (on the rail): "I was talking to an eminent physician in the smoker"

Mrs Jinks: "What is his name?"

"He didn't mention it, and I didn't like to ask him."

"Then why do you think he is an eminent physician?"

"I asked what was the best cure for consumption, and he said he didn't know."—*Puck.*

Eh—What's This?—

The *Boston Traveler* says: "A butterfly was caught at the South End yesterday."

It may be safe enough to catch a butterfly at the south end, but when you go to grab a wasp you want to catch it at the northeasterly end, shifting westerly toward the head.—*Scottish American.*

Division of Profits.—

A bushel of corn is said to make four gallons of whiskey. The farmer gets forty cents, the railroads a dollar, the government $3.60, the manufacturer about $5.00, and the saloonkeeper $6.00, out of the $16.00 for which it is sold, while the drinker gets the refuse, and—delirium tremens.

Is it a Libel?—

God made the earth in six days, and then rested; then he made man, and rested again. Then he made woman; and since that time neither God nor man has had a rest.—*Medical World.*

Suggestive.—

Physician: "What is your profession, sir?"

Patient (pompously): "I'm a gentleman."

Physician: "Well, you'll have to try something else; it does not agree with you."—*Tid-Bits.*

Pathological Sarcasm.—

The princes and potentates of Europe are aptly described as men with all kinds of orders on their breasts, and all sorts of disorders in their blood.—*Exchange.*

Cheap Doctors.—

It is reported that a medical college in Denver, Colorado, advertises to give free tuition to all students from without the State.

Book Reviews.

ANNALES D'OCULISTIQUE. Price, 50 cents; $5.00 per year. Trans-Atlantic Publishing Co., New York.

The January number (first of the English reprint), edited by Doctor George T. Stevens of New York, is before us. This is an enterprise of the Trans-Atlantic Publishing Co. which cannot fail to meet the desires of a large number of oculists who have hitherto been debarred from the French literature pertaining to their specialty Moreover, the American and English edition is not a belated reprint of the French edition, but is issued contemporaneously with the latter. The aim of the directors on both sides of the Atlantic is, to maintain the distinguished place which this journal has always occupied in medical literature, and to advance its usefulness with the progress of ophthalmological science. The original articles are: "Optic Neuritis Consecutive to Ozæna," by Doctor D. E. Sulzer; "The History of Artificial Eyes," by Doctor Pansier; "Acute Purulent Interstitial Keratitis," by Doctor DuGourley; "Vascularization of the Anterior Surface of the Lens in Chronic Irido-choroiditis;" "Septic Irido-choroiditis Consecutive to Uterine Hæmorrhage," by Doctor Valude. There are also reports of the Ophthalmological Society of Paris, Ophthalmological and Laryngological Society of Bordeaux, Ophthalmological Society of the United Kingdom, Medical and Surgical Society of Bordeaux, Congress of Hungarian Physicians and Naturalists, Medical Society of Paris, Academy of Sciences, Paris Society of Dermatology and Syphilography, and Medical Society of Geneva. Likewise "Reviews of Ophthalmological Journals," "Book Notices," "Miscellany," and "News."

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 per year. Overland Publishing Company, San Francisco.

The March issue is a fiction number. In addition to his regular department Mr. Wildman contributes a thrilling story of an Idaho stage robbery—"As Told by Owyhee Joe;" General Lucius H. Foote, under the caption of "Swipes," relates a charming tale of a pair of waifs in the days of the Argonauts; Batterman Lindsay contributes another installment of "Extracts from Mrs. Lofty's Diary;" in the "True Tales of the Old West" series there are two contributions, one—"Blackfeet and Bruin"—by S. S. Boynton, and one by C. D. Robinson—"The Mystery of a Drill;" "Elvira's Chance" is a story of the Kansas prairies; "Hepsibah's Wooing"

is by H. A. Vachell. We note a paper entitled "Told in the Dog-Watch," by T. J. B., which from start to finish is gross plagiarism —it is taken from the Irish Department in Burton's Cyclopedia of Wit and Humor, published by the Appletons in 1858.

We note also the third installment of "The Evolution of Ship Building in California;" "Good Roads," by General Stone; and "The Digger Indians," by General Green.

OUTING. Price, 25 cents; $3.00 per year. Outing Co., New York.

The *February* number contains: "With Gun and Palette Among the Redskins;" "A Jamestown Romance," by Sara B. Kennedy; "Ma P'tite Philomène," by Therèse G. Randall; "An Adventure with a Tarpon," by Fred J. Wells; "A Virginia Turkey," by Arundell Mulville; "Irish Hounds and Hunting," by T. C. Blackwell; "Miniature Yacht Modeling," by Franklyn Bassford; "Græco-Roman Games in California," by Arthur Inkersley; "World Tour Awheel," by Lenz; "Curling in the Northwest," by H. J. Woodside; "Witch Kate," by R. G. Denig.

March: "A Study in Love," by L. D. Mitchell; "A Jamestown Romance," by Sara B. Kennedy; "A Yaqui Boar-hunt;" "Fish-shooting in the West Indies;" "The Conversion of Trapper Lewis;" "A Reminiscence of Texas Shooting;" "Bush Memories of Australia;" "Evolution of the Games of Japan," by Kinza Hirai;" "The Eden of the Gulf."

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

The March issue contains: "The Women's Rights Question in Rome—195 B. C.," by Arthur Harvey; "A Yankee in Halifax," by Allan Eric; "The Politics of Japan," by Charles T. Long; "An Original Retribution," by Charles Nelson Johnson; "The Newspapers of Newfoundland," by J. F. Morris Fawcett; "An Arab Dinner," by Reverend W. S. Blackstock; "Sacrament Week in the Lake Megantic Region," by Margaret Ross; "Buried Under an Avalanche," by John C. Werner; "The Intercolonial Railway," by P. F. Cronin; "Laying a Submarine Cable," by Frederic Adam Hamilton; and the usual "Gable Ends" and "Book Notices."

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 per year. Donahoe Magazine Company, Boston.

The March issue contains the usual number of well written articles on subjects of timely importance, and many excellent artistic illustrations. The leader by Honorable William B. Rice presents a graphic picture of the growth of the great cities of the world, and suggests the federation plan of government. "The Present Political Chaos" is by Mason Arnold. Mr. M. J. Dwyer presents "Points from the Encyclical." An article on "U. S. Senators of the Catholic Faith," is by A. J. Faust, Ph.D. Abbé Hogan and Reverend Joseph Selinger, D.D., discuss the development of scientific study in the seminaries. James Stephens, under the heading "Souvenirs of My Early Career," gives a glowing description of the rise and collapse of the "Young Ireland" movement in '48.

MCCLURE'S MAGAZINE. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

A talk with the author of "Trilby," Mr. George Du Maurier, appears in the April number; a short story by Ian Maclaren; stories by Conan Doyle and Robert Barr; the conclusion of Miss Tarbell's "Life of Napoleon;" the first of a series of papers relating the dramatic history of the Tammany Society, by E. J. Edwards; an account of the remarkable frauds that have been practiced on the Bank of England; another story from the archives of the Pinkerton Detective Bureau; a study of Pierre Loti, by Madame Adam; and a series of portraits of Hall Caine, the author of "The Manxman."

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia, Pa

The complete novel in the April issue is "Alain of Halfdene," by Anna Robeson Brown; Mrs. Poultney Bigelow writes of "At the Hop-Pole Inn;" "The Defendant Speaks" is by Genie H. Rosenfeld; "The House with the Paint Wore Off" is by Marjorie Richardson; Mme. Melba writes of "Grand Opera," Alvan F. Sanborn of "Cheap Living in Paris," Mary E. Stickney on "Bucolic Journalism of the West;" "Woman's Lot in Persia" is by Wolf von Schierbrand. The poetry is by M. S. Paden, Champion Bissell, Charles G. D. Roberts, and Robert B. Hale.

PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 per year. The Fowler & Wells Co., New York.

The contents for March are: "Mrs. Elizabeth B. Grannis," by Doctor Edgar C. Beall; "Do Men Gossip?" by Jessie M. Holland; "Sketches of Phrenological Biography," by Charlotte Fowler Wells; "To Promote Phrenology," by Doctor George MacDonald;

"Abolish Capital Punishment," by Countess Ella Norraikow; "Phrenology and Unfortunate Marriages;" "Child Culture;" "Children and the Law in England;" "Aims and Status of Child Study;" "Science of Health;" "Notes in Anthropology;" and the usual editorials and "Answers to Correspondents."

Popular Science Monthly. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

"Some Curiosities of Thinking" are described by Doctor M. Allen Starr in the April issue. "The Successor of the Railway" is by Appleton Morgan; a fully illustrated account of "Some of the Outliers Among Birds" is by Doctor R. W. Shufeldt; the second of Doctor C. Hanford Henderson's series of articles on "Manual Training" appears in this issue.

Human Anatomy. By Henry Morris, A.M., M.D., London. Cloth; 8vo; pp. 1286. Price, $7.50. P. Blakiston, Son & Co., Philadelphia.

This is the most complete anatomical text-book which has ever come to our table, and remarkable in that the illustrations are true to perspective—a peculiarity very seldom observed. Written by ten of the foremost anatomists and surgeons of the day, it is in its style concise, harmonious, and well balanced, bearing evidence of the highest skill and thoroughness on the part of the editor. Dealing with the subject as now taught in the medical schools, this work is for teachers and students alike the most complete and practical text-book ever presented. Heretofore works on anatomy have been not only uninteresting but for the most part absolutely appalling in their awkward and verbose presentation of facts. Morris's Anatomy, on the contrary, commands the interest of the student from the initial chapter to the final page.

Twentieth-Century Practice. Edited by Thomas L. Stedman, M.D. Volume I. Cloth; 8vo; pp. 737. Price, $5.00. William Wood & Co., New York.

This volume is devoted to diseases of the ıropoietic system and is the advance number ɔf a series that, when completed, will be a ɔractical epitome of modern medical science. The contribution on diseases of the kidney is ɔy Doctor Francis Delafield; diseases of the renal pelvis, the ureters and the bladder ıre discussed by Mr. Reginald Harrison (London); diseases of the prostate and male ırethra by G. Frank Lydston; hæmaturia, ystinuria, chyluria and pyuria by Mr. H. Fenwick (London). The closing chapters are devoted to diseases of the female bladder and urethra, by Howard A. Kelly, who thoroughly elucidates his new method of examination never before treated in any text-book or treatise.

Mental Diseases. By Daniel Clark, M.D. Cloth; 16mo; pp. 328. Price, $1.25. William Briggs, Toronto.

This is one of the best introductions to the study of mental disease it has been our lot to encounter, and yet it purports to be no more than a synopsis of twelve lectures delivered at the Hospital for the Insane at Toronto to the graduating medical classes. Though intended as a guide for senior medical students, it is equally available as a manual of psychophysics for the busy physician. It is eminently practical, and yet devoid of the vast amount of useless material that usually encumbers works of this kind. We cordially commend it as a text-book and work of reference, the more so as its style and general make-up are calculated to interest rather than repel the reader.

A Pathogenic Materia Medica. By the Medical Investigation Club of Baltimore, Maryland. Cloth; 8vo; pp. 347. Price, $2.00. Boericke & Tafel, Philadelphia.

This is a publication under one cover of numerous studies that have on various occasions appeared in the *Hahnemannian Monthly* and the *Southern Journal of Homœopathy*. The welcome received from the homœopathic fraternity was such that it was deemed advisable to place these studies in a form where they could readily reach a larger number of readers. Forty-seven drugs have been studied from a homœopathic standpoint, and the volume certainly cannot but be of interest to gentlemen of this school.

Martin Hewitt, Investigator. By Arthur Morrison. Paper; 16mo; pp. 264. Price, 25 cents. Rand, McNally & Co., Chicago.

This is No. 194 of the Globe Library, and deals with the experience of an English private detective in ferreting out obscure crimes and happenings that seem to have baffled the regular police force.

Physicians' Vade Mecum. By Sebastian Wimmer, A.M., M.D., and Frank S. Parsons, M.D. Cloth; long 32mo; pp. 483 Price, $1.00. The Medical Publishing Co., Philadelphia.

This little work is intended for quick reference, and as such will appeal to the general practitioner and druggist.

Therapeutic Brevities.

Dietetic Treatment of Phthisis.—Never take cough mixtures if they can possibly be avoided:

Food should be taken at least six times in the twenty-four hours; light repasts between the meals and on retiring:

Do not eat when suffering from bodily or mental fatigue or nervous excitement:

Take a nap, or at least lie down for twenty minutes, before the mid-day and evening meals:

Starches and sugars should be avoided, as well as all indigestible articles of diet:

So far as possible each meal should consist of articles requiring about the same time to digest:

Only eat as much as can be easily and fully digested in the time allowed:

As long as possible, systematic exercise should be taken to favor assimilation and excretion; when this is impossible, massage or passive exercise should be undergone:

The food should *always* be nicely prepared and daintily served—made inviting in every way.

The following diet sheet is suggested for the early stage: *On awakening:* Eight ounces of equal parts of milk and seltzer, taken slowly through half an hour. *Breakfast:* Oatmeal and cracked wheat with a little sugar and abundance of cream; rare steak or loin chop with fat; soft-boiled or poached egg; cream toast; half-pint of milk; and a small cup of coffee. *Early lunch:* Half-pint of milk or small teacup of squeezed beef-juice with stale bread. *Mid-day meal:* Fish; broiled or stewed chicken; scraped meat-ball; stale bread and plenty of butter; baked apples and cream; and two glasses of milk. *Afternoon lunch:* Bottle of Koumyss, raw scraped-beef sandwich, or goblet of milk. *Dinner:* Substantial meat or fish soup; rare roast beef or mutton; game; slice of stale bread; spinach; cauliflower; fresh vegetables in season (sparingly).—*Practitioner.*

Topical Uses of Chloral and Iodoform.—A valuable application to ulcerated surfaces is a solution of Chloral hydrate in glycerin and water in the respective proportions of one, two, and ten. It relieves pain, cleanses the parts, and will be found useful in cancerous ulcerations of the tongue, mammary gland, vagina, uterus, rectum, and glans penis; in varicose ulcers, phagedenic ulceration, gangrenous sloughs, herpes zoster, eczema, impetigo, etc. A more healthy character and appearance is stimulated, the discharges to become less offensive, and pain is reduced a minimum—these effects are apparently due to its action upon peripheral-nerve terminations. Chloral in glycerin (one to two) is also a valuable injection in hydrocele.

In rectal fissures and painful ulcerations about the anus, an ethereal solution of Iodoform applied after manual stretching tends to overcome the spasmodic stricture of the sphincters. Nothing is pleasanter or more efficacious than the same applied with a hair pencil to ulcers of the lips and gums and painful conditions of the nasal mucous membrane—the strength ordinarily used is four drachms of iodoform to the ounce of ether. A better preparation perhaps is Collodoform, which should be a clear, transparent mixture, and is thus prepared:

℞ Ethereal tincture of iodoform (1 to 16), 12 drachms.
Solution of boracic acid in glycerin (1 to 8), 8 drachms.
Collodion, 16 drachms.

Apply as a coating to the ulcer, morning and evening.

It relieves the pain and promotes healing of anal fissures.

Administration of Male Fern.—The active principle of this agent is an acid which is absorbed with difficulty. This acid, however, when combined with fatty or ethereal oils is more readily absorbed, and thus sets up more easily symptoms of poisoning. In severe poisoning there may be cerebro-spinal paralysis, but in the milder cases violent vomiting, abdominal pain and faintness may be noted. The slighter symptoms are more frequent, such as icterus (which is mostly absent in the more rapidly fatal cases). Grawitz observed jaundice only occasionally as a sequel to catarrh of the bile ducts. He examined the blood in some ten cases and found evidence of destruction of red cells; but since hæmoglobin was absent from the serum, he concludes this destruction does not take place in the circulation, but in the liver itself. Four cases are recorded in which there was cirrhosis of the liver as well as helminthiasis, and where the hepatic symptoms were much aggravated after the use of Male Fern. This drug should therefore be given cautiously where there is any evidence of hepatic disease, and especially in the alcoholic or syphilitic. It is also well to *avoid the use of castor oil* along with the extract.—*Berliner Klinische Wochenschrift.*

Picrotoxin as an Antisudorific.—A lady forty-three years old had an attack of influenza in

December, 1893, with high, persistent fever, headache, and slight cough. During the long convalescence she began to suffer from sweating, which came on after the least exertion, and gradually increased until it poured off in rivulets. Together with this hyperidrosis she had dull red patches on the skin, which were more or less persistent. There was no noticeable alteration, either subjectively or objectively, in the nervous system. There was a slight systolic murmur at the apex, and some accentuation of the second sound of the heart in the pulmonary area. Atropine, agaricin, camphor, gallic acid, and other antisudorifics were tried, but with no effect. I concluded the sweating was due to a vaso-motor paralysis, and the presence of the dull red patches on the skin offered confirmatory evidence of this diagnosis. As Picrotoxin has a stimulating action on the vaso motor centre, I administered it twice a day in doses of half a milligramme each. The result was highly satisfactory. The sweats gradually diminished, and in eight days had entirely disappeared.—Mariano Semmola, in *Riforma Medica.*

To Abort Carbuncle and Malignant Pustule.—Take a large hypodermatic syringe, fill with a 1-to-500 solution of Bichloride, insert the needle in one of the peripheral openings, and wash out the little cavity. Then direct the needle toward and into the surrounding induration and force a little of the solution into it.

Treat every opening and its corresponding peripheral surroundings in the same manner, carefully washing out the necrosed connective and other tissues that have become separated.

Repeat this procedure daily, gradually reducing the solution to one-half the original strength, until all indurations have disappeared and granulations begin to make themselves manifest. If the first injection be thoroughly performed, the spread of the carbuncle will be arrested at once and there will be no more pain. Washing out the little cavities is painless, but the injection into the indurated tissues is not.

This treatment is applicable to the little furuncles that invade the external meatus of the ear and the inner surfaces of the alæ of the nose.—Doctor Baker, in *Medical Week.*

Jaborandi in Pneumonia.—I think that in fluid extract of Jaborandi we have a drug that in many cases will force a crisis when given in the congestive stage of pneumonia. I have used it for several years with good effect. When given in the primary stage it induces free diaphoresis, and all the glands are made active; in this way the lung is enabled to throw off its engorgement, and the whole nervous system is relaxed. In the secondary stage of pneumonia, Jaborandi has only the effect to lessen the fever. After giving the fluid extract I follow with quinine, and stimulants if indicated, and seldom require more than three doses to secure the desired effect.

The cases I fail to abort, I find, run a milder course, so that no time is lost by giving the Jaborandi in the primary stage. If bleeding is ever advisable in pneumonia it is in the first stage, thus relieving the engorgement, and Jaborandi exerts the same influence without the loss of the blood.—Doctor O. H. Burford, in the Proceedings of the Georgia Medical Association.

Cold Bath in Puerperal Septicæmia.—The cold bath is contra-indicated when peritonitis, phlegmon of the broad ligaments, or phlegmasia dolens exists. It has proved successful when grave maladies, such as measles, erysipelas, eclampsia, or bronchitis, have complicated the puerperal infection. Treatment must not be delayed when high temperature and general constitutional disturbance have set in. First of all, make sure that the uterus is free from the products of conception. Then, should the temperature rise over 101°, the bath must be used. It is often of value when the temperature is lower, the patient already suffering from headache and hot skin. The bath should be a little over 75° F., as a rule. It is right to leave the patient in till she shivers, especially when hyperpyrexia is the most marked symptom; in other respects the same precautions are needed as in typhoid fever. Subcutaneous injections of Caffeine or Sparteine should be given before the bath when the symptoms are severe, so as to counteract the tendency to syncope. —Macé, in *Archives de Gynécologie.*

Asafœtida in Abortion.—In cases of abortion, small doses of opium frequently disappoint, whereas large and repeated doses may prove injurious. Asafœtida is recommended by Italian obstetricians, and is usually administered in pills containing one and a-half grains, though an enema containing the tincture is preferred in cases of threatened abortion. The drug is most efficacious in reducing the hæmorrhage which is prone to appear subsequently; even with a very severe and alarming onset the first dose appears to exert a most tranquillizing effect, and leads to a

gradual separation of the ovum unattended by contractions. Where habitual abortion exists the pills are administered, commencing with two daily and increasing to ten daily, the number subsequently being again reduced. No unpleasant symptoms are produced, but, on the other hand, the action of the bowels is very much assisted.—*Therapeutische Monatshefte.*

Best Forms of Quinine.—The Société de Therapeutique recently appointed MM. Adrian, Bardet, Berlioz and Boymond a committee to report on the above question. They conclude that the best salt is the hydrochlorate, it being the richest in alkaloid, sufficiently soluble, and less irritating to the stomach than the sulphate. The hydrobromate should be used only in cases rebellious to the hydrochlorate. As to the pharmaceutical form in which the hydrochlorate should be administered, compressed preparations are condemned, and pills made up with a soluble excipient or soft elastic gelatin capsules are recommended. Pills or capsules containing each fifteen centigrammes of the hydrochlorate, and given one in the morning and one at night, or else before meals, suffice to keep the system under the influence of quinine so as to ward off attacks of malarial fever.—*The Lancet* (London).

Chloroform in Tetanus.—P. A. Prëobrajensky relates four cases of acute tetanus treated by Chloroform inhalations which were repeated from one to three times a day, the daily dose of the drug varying from two to four drachms. In addition, hot baths and subcutaneous injections of morphine were occasionally employed. Three of the patients recovered; one succumbed from supervening catarrhal pneumonia on the seventeenth day of the primary disease. In all the cases the inhalations induced muscular relaxation, while the breathing became deep and regular, and the pulse stronger and slower. The patients could be fed during the early stage of the narcosis, which also secured a quiet sleep of several hours' duration.—*Vratchebnyia Zapisky.*

Fistula in Ano.—Surgeons in all ages have tried to relieve fistula by means of plasters, salves, ligatures, and other methods, rather than by the knife; indeed it is only recently the latter has taken its place as the only certain measure available. The method of application is: The sphincter is stretched, the rectum cleansed with a bichloride solution, and the fistula opened up by straight scissors; after removal of all unhealthy tissues the opening should be closed by a single row of catgut sutures, passed, by means of a curved needle, entirely beneath and around the wound. By this method I have never failed to cause the bottom of the wound to unite.—Doctor Cook, in *Mathews' Medical Quarterly.*

Ergot in Night Sweats.—The night sweats of consumptives I believe are not simply due to fever, but to some cause that has yet to be fully explained. Many remedies have been recommended—quinine, acetate of lead, atropine, hyoscine, muscarine, brandy, rubbing the body before sleep, etc., etc.—all of which have been found wanting. Considering the part probably played by the vasomotor nerves, I determined to try the effect of Fluid Extract of Ergot, in doses of five minims each, just before bedtime; and the result was that the cases were very few in which the remedy was useless. Latterly I have employed subcutaneously with equally good effect.—Doctor Goldenbach, in *Deutsche Medicinische Wochenschrift.*

Chloroform.—V. G. Stadnitzky carried out a series of elaborate experiments on seven healthy young men in order to study the influence of this agent, when administered internally, on the gastric functions. In each instance the experiment lasted fourteen days, being divided into two equally long stages, during the second of which the subject was given from three to ten minims (with water) three times daily. The conclusion is to the effect that Chloroform markedly improves all the functions of the stomach, which fact suggests that it may prove most valuable in the treatment of gastric disturbances and, before all, in dyspepsia.—*Vratch.*

Quebracho.—This drng is the digitalis of the lungs—it is an active stimulant to the respiratory centres, but in an overdose will paralyze the respiration. It is directly indicated in all forms of dyspnœa, whether of asthmatic, cardiac, or nervous origin. Where there is a sense of suffocation with cyanosis, it is speedy and satisfactory in its action. In the dyspnœa of croup it will give relief and may sustain the respirations until the obstacles are removed. The dose of the fluid extract is from fifteen to forty minims, and of the alkaloid *Aspidospermine* from one-eighth to one-half a grain.—*Medical Times.*

Hæmophilia.—Among the various remedies employed in this malady, which is so difficult of management, and for which all treatment is so often useless, Calcium Chloride is well worthy of trial, as it is a valuable agent in promoting coagulability of the blood. Cocaine has also been suggested in the same connection, but in order for this drug to be successful there must still remain some power of contractility in the vessels, for Cocaine can only check bleeding by bringing about vascular contraction in the area under its influence. The relaxation must also be guarded against.—*Polyclinic.*

Excoriations from Walking.—The best treatment for excoriation of the feet as the result of prolonged exercise, if of recent date, is the application of a few layers of aseptic gauze, kept in place by means of a tightly drawn strip of linen cloth; this does not interfere with walking if the boots of the patient are sufficiently large. When the excoriation is infected, it is best painted with a two-per-cent. solution of silver nitrate before applying the dressing.—*Vratch.*

Varicose Veins.—Schude, of Hamburg, proposes a new operation for varicose veins of the lower extremities. He makes an incision four or five inches below the knee entirely around the leg, dividing the skin fascia and all the superficial veins down to the fascia covering the muscles; the cut ends of the veins above and below are then tied with catgut and the wound closed. He reports thirty or forty cases, with satisfactory results in every instance.

The Topical Value of Bismuth.—The most satisfactory remedy as an application in orchitis or swelled testicle is a paste made of Subnitrate of Bismuth and water; it relieves the pain and burning sensation at once, and gradually diminishes the swelling. It is useful in the burns and scalds of children; also as a face ointment (made by being rubbed up with rose-water), for sunburn, blistered skin, and chafing in the groins.—Doctor W. E. Bessie.

For Sluggish Liver.—

℞ Podophyllin, 3 grains.
Euonymin (green), 18 grains.
Belladonna extract, 3 grains.
Blue mass, 24 grains.

Make twelve pills; one to be taken at bedtime.

—*Exchange.*

Surgical Shock.—Atropine is the quickest and most valuable remedy known in surgical shock and those conditions which resemble it, as the stage of collapse in cholera and cholera infantum. It may be given hypodermatically, or by mouth in the form of a granule dissolved in hot water, one granule every ten minutes until the desired action occurs.—*Exchange.*

Acne.—

℞ Sublimed sulphur, 7 parts.
Beta-naphthol, 2 parts.
Styrax ointment, 2 parts.
Fresh lard, 50 parts.

Rub in every night for a week. Omit a week, and repeat.

—*Exchange.*

A Pneumonia Specific.—Doctor Vetten recommends Iodide of Potassium or Sodium as a specific in pneumonia, given in large doses during the first twenty four hours following the inception of the disease. In most instances the Sodium salt will be found preferable, as it is better borne by the stomach.

For Chilblains.—

℞ Tincture digitalis, 6 parts.
Thymol, 3 parts.
Alcohol, 150 parts.
Glycerin, 150 parts.

Mix, and rub well on the affected part.

—*Les Nouveaux Remèdes.*

Tertiary Syphilis.—Santi recommends the application of Sulphate of Copper to pharyngeal ulcerations of a tertiary syphilitic character. He applies a four-per-cent. solution once every day, and pays due attention to specific treatment.—*Register.*

Dyspnœa.—Quebracho is a very useful remedy for dyspnœa, even in cases where there is degeneration of the cardiac muscles, atheromatous arteries, or emphysema.—*St. Louis Courier of Medicine.*

Cough Remedy.—Doctor Charles E. Page, of Boston, declares the best remedy for cough he has ever found is a teaspoonful of moderately hot water taken every time a paroxysm comes on.

Clematis Erecta.—Known also as Virgin's Bower, like rhododendron acts upon the testicles, and relieves orchitis, even of gonorrhœal origin.

Medical Progress.

Morbid Anatomy of Lungs after Influenza.—Louis B. Hayne, of St. George's Hospital, London, discusses the various pathological changes visible to the naked eye in the lungs of victims to the recent epidemics of influenza. The mortality of influenza seems to be mainly due to involvement of the lungs, the deaths from the virulence of the febrile attack and from implication of the digestive tract being comparatively few. These pulmonary complications were fatal not only to the young and the aged, but also to adults in the prime of life, death generally occurring about the tenth day after the onset of the attack.

In the cases of pneumonia occurring in influenza, the peculiar smooth aspect of the consolidated lung noted by Ribbert has been frequently observed in the deaths from recent epidemics, alone as well as with associated areas of broncho-pneumonia. The solid lung often appears to be composed of a number of patches of broncho-pneumonic consolidation, these patches having run together and involved the entire lung, suggesting the appearance of a confluent broncho-pneumonia rather than that of the croupous variety of pneumonia. Some lungs, on the other hand, show the results of ordinary lobular pneumonia, this condition being observed in early adult life quite as frequently as in youth or old age. Broncho-pneumonia, rare under ordinary circumstances in an adult, except cases of septic origin, is by no means uncommon as a complication of influenza, but the confluent type just referred to is even still more common. This is often found in the same lung in conjunction with a red hepatization, the gray, isolated patches of consolidated lung-tissue around a small bronchus contrasting very plainly with the uniform red and congested appearance of the remaining tissue. These patches often seem to originate in the posterior borders, and thence to spread to the apices and sides, so as eventually to involve the whole lobe. In other cases the apices are the parts first affected, apical pneumonia being more frequent than any other condition in influenza.

In some cases pale patches of broncho-pneumonia have been found scattered throughout the lung, suggesting at first sight tubercle of the miliary type. Under the microscope the small bronchi are seen filled with fibrinous plugs; the cells lining the bronchi have undergone proliferation, some having escaped into the lumen of the tube; the alveoli in the neighborhood are crowded with catarrhal cells, and the blood-vessels in the surrounding tissue are dilated and crowded with corpuscles, some of which appear to have escaped from the vessel-walls into the pulmonic substance. These patches are distinct around each bronchiole, but run into one another at the periphery The distribution is thus broncho-pneumonic, while the character of the exudation resembles that met with in lobar pneumonia. As in broncho-pneumonia, the localized patches of consolidation are accompanied with collapse of the neighboring lung-tissue, due to a similar cause, viz., the blocking up of the bronchioles with exudation and the consequent removal of the air from the alveoli in communication with the bronchioles at fault.

Localized patches of pleurisy, characterized by adherence of the pleural surfaces to each other by means of recent lymph, are also frequently present, and arise from an extension of the inflammation from the superficial patches of consolidated lung-tissue. Pleural effusion is rare, not one case being found among the records of post-mortem examinations at St. George's Hospital during the recent epidemics of influenza.

Besides the capillary bronchitis, which generally terminates fatally, inflammation of the larger tubes is very common. The bronchi are found to be congested, their inner walls often being covered with thick, tenacious mucus; as a rule, the larger tubes are not so deeply congested as the smaller ones. They are usually filled with muco-pus, and in some cases are so distended with purulent secretion that on being cut across they look exactly like small abscesses, varying from the size of a pea to that of a pin's head. The whole thickness of the bronchial wall is considerably softened, accounting for the dilatation of the tubes so often present. Occasionally the walls are so dilated that a condition of acute bronchiectasis is simulated. The dilatation involves the whole length of the tube, but more markedly its terminations, being thus of the cylindrical variety. Clinically, however, the typical symptoms of bronchiectasis are not manifested, though the expectoration may be very profuse. The contents of the tubes are not always muco-purulent in character, but are sometimes quite fibrinous or membranous.

In most cases there is present not one of the conditions just described, but a number of them. One lobe may be in a state of solid, gray hepatization, another may be studded with disseminated patches of consolidation of varying sizes, while at the same time the bronchial tubes may present any of the morbid conditions above noted.—*Practitioner.*

Improved Method of Lavage.—A very simple improvement in apparatus for washing out the stomach is described by Doctor W. Beattie Nesbitt, in the *Archives of Pediatrics*. The fluid is obtained, as usual, from a siphon bottle placed above the level of the patient, but the india-rubber tube from this bottle is connected with the stomach catheter, not by a piece of straight glass tubing, but by a glass tube shaped like a widely open tuning fork; the handle of the tuning fork is connected with the stomach catheter, one limb with the tube from the bottle, and the other with a waste tube conducted into a suitable receptacle. It is convenient to have the tube from the bottle and the catheter of red rubber, and the waste tube of black rubber. The tubes from the two limbs are placed over the forefinger of the right hand, and are held loosely in the palm; either can then be easily compressed by the thumb. When it is desired to fill the stomach, the catheter having been introduced, the waste tube is compressed, and the fluid readily flows into the stomach from the bottle; when the stomach is to be emptied, the red or siphon tube is compressed and the black released. If the eye of the catheter becomes blocked, as often occurs, the current is easily reversed by compressing the black and releasing the red tube. Doctor Nesbitt recommends the use of a mouth gag, and, after inserting the tube, places the child on its side, with the face slightly downward. Before removing the catheter the stomach is filled quite full. An act of vomiting generally follows the withdrawal of the tube, or if not it may be excited by titillating the fauces. "In this way," writes Doctor Nesbitt, "I have often removed large pieces of coagulated putrid casein, half an inch to an inch in length, of such a tough leathery consistence that no amount of washing would have broken them up."—*Journal of the American Medical Association.*

One Reason for the Preponderance of Nervous Diseases.—One of the principal reasons, in my opinion, for the enormous increase of nervous diseases, is to be found in the management and rearing of the infant as now and for some time past practiced, especially in the average American families.

It is almost a universal fact that from the hour of its birth to the hour of its maturity the American human infant is constantly subjected to a course of stimulation, so far as the nerve centres are concerned. The young parents, and the older ones, as well as the grandparents and uncles and aunts, are each and all so anxious to have the baby a smart, 'cute little thing, that every device that can be thought of is resorted to in order to stimulate the child's mental faculties and to have it notice objects as soon as possible; and here let me say that I really believe in some instances they have succeeded in developing that faculty as early as the first few days of life. As it grows older, it is urged by every means known to humanity to talk, to give expression to its thoughts in any possible way or form; and by the time such an infant is four or five years old its nerve centres have been so fearfully developed and overstimulated that it is quite possible for it to give expression to opinions and ideas which would compare favorably with those of maturity. This condition of things is made to ramify every channel of life which it is possible to bring before the infant; and such conditions are continued until the child degenerates into hopeless lunacy from overstimulation, or else "becomes its own master," as the saying is. When such an infant has reached its majority and maturity, it usually comes before the world with a nervous system already wrecked by having been overstimulated and developed, and therefore unable to stand the strain usually demanded from a healthy, well balanced system.—A. M. Beers, M.D., in *Columbus Medical Journal.*

Ether and Albuminuria.—If etherization has still determined opponents, it is because the careful study of this method of anæsthesia has often been somewhat neglected, and because, on account of some real inconveniences of the method, too much stress has been laid on observations of little value.

Certain American surgeons have maintained that ether exercises an unfavorable action on the kidneys, but this opinion is not very well founded. In order to determine the alleged relation of cause and effect between etherization and albuminuria, I analyzed the urine of persons who had been operated on, before and twenty-four hours after the operation. Out of a hundred and fifty cases, albumen was found after the operation in four only, in two of which there had been signs of albuminuria before the operation and the quantity of albumen had not increased under the influence of the ether. With regard to the two cases where albumen did not manifest itself until after the operation, one of the patients had been subjected to laparotomy for intestinal occlusion, after having been for three days in a condition of extreme prostration, and died on

the day of the operation; the other one had been operated on for inguinal hernia by Kocher's method, and after the operation considerable albuminuria appeared and persisted, although gradually diminishing, for four days; it was, on the whole, the only case out of the one hundred and fifty of true nephritis due to etherization.

In a very interesting case of nephrectomy for left hydronephrosis, a child of three years bore ether well. There was no vomiting, and after the operation not even a trace of albumen was found.—Doctor Barensfeld, in *Münchener Medicinische Wochenshrift.*

Resection of the Rectum.—Zancarol records four successful instances of Kraske's operation performed for cancer of rectum and cancer of both rectum and vagina. In two the peritoneal cavity was opened without bad result. In each case the wound suppurated, and the sutures fixing the divided end of the intestine to the skin gave way. The average period within which cicatrization was completed was forty-five days. The patients increased considerably in weight after operation, and all were discharged in a very satisfactory state of health. Up to date no relapse had occurred after respective intervals of eighteen, six, four, and two months. None of these patients, it is particularly pointed out, suffered at the time of their discharge from fæcal incontinence, and all were able to control their evacuations. This is the more remarkable as in each case it was found necessary to remove almost the whole of the sphincters. In the discussion on this record, Quénu stated that after resection of the rectum there is usually incontinence for a time, but that the patient gradually regains the power of retaining the fæces. This is due not to retention of any portion of the sphincter, but to increased activity of the special muscular fibres of the intestine, acquired function thus creating a new organ.—*British Medical Journal.*

Absorptive Power of the Vagina.—Recently observations have been made regarding the absorptive power of the vagina under various conditions of health and disease. Iodide of potassium is easily absorbed; if a tampon soaked with a twenty-per-cent. solution be introduced into the vagina, iodine can be found in the urine in an hour—the excretion reaches its maximum in twenty hours and ceases in forty eight hours. Fever and pregnancy increase the absorption. Hysterectomy makes no difference. Iodoform is absorbed slowly and in very small quantities, but more if fresh than old. Salicylic acid is absorbed quickly, appearing in the urine in one hour and disappearing in twenty four hours. Salol is very readily absorbed. In brief, the vagina has undoubted absorptive power, and this is increased in pregnancy, in the puerperal state, and in pyrexia.—Coen, in *Collezione Italia di Letture sulla Medica.*

Increased Ocular Tension.—When iridocyclitis or panophthalmitis follows the operation for secondary cataract, it is because the operation has caused an increase of tension and if this be relieved the disease will be cut short.

In two cases there was intense pain within forty-eight hours after the operation, with increased tension. In both of these, punctures were made with a broad needle through the upper part of the cornea, through the iris and into the vitreous body. The needle was turned so as to allow some of the vitreous humor to escape. In fifteen minutes the patient was perfectly easy, and recovered perfectly.—Doctor Teale, in *The Lancet* (London).

Menstruation in a Child.—At the Kiel Obstetrical and Gynæcological Society Doctor Rein exhibited a girl aged six, who had commenced to menstruate regularly about a twelvemonth previously. The catamenia recurred every three or four weeks, and lasted on each occasion from four to ten days. The breasts, external genitals and pubic hair growth resembled those of a girl thirteen or fourteen years old. The abdomen proved to be considerably enlarged, the circumference amounting to eighty-five centimeters. Examination revealed the presence of a fluctuating, thick-walled, ovarian cyst.—*Vratch.*

New Method for Artificial Anus.—Karl Lauenstein overcomes the difficulty of temporary closure of the artificial anus by drawing the segment of colon far outside the wound, so that after division a "penis-like" portion of gut projects. The gut is sutured to the abdominal wall at its point of emergence. Gangrene of the protruding portion, which might be anticipated, does not occur. The opening is readily closed by a truss or by twisting, or a receptacle can be easily attached.—*Centralblatt für Chirurgie.*

The Medical Age.

VOL. XIII. DETROIT, APRIL 10th, 1895. No. 7.

Original Articles.

TYPHOID-MALARIAL REMITTENT FEVER.

BY DOCTOR JOAO VINCENTE TORRES HOMEM.*

(*Continued from page 167.*)

Case 1.—Avelino, mulatto slave, 28 years old and of good physique, entered the Santa Izabel ward on the 23d of August, 1869. Had attacks of intermittent fever a month before, without taking any quinine; took only a purgative of citrate of magnesia on the 15th, which produced great relief, as the symptoms reappeared only on the 20th. On the night of the 22d, after a chill of short duration, had fever and was slightly delirious. On the morning of the 23d the fever continued, very high; patient very apathetic to all surroundings, and answered questions with difficulty. In this condition he was sent at 3 P.M. to the hospital. The interne on duty prescribed sixty grammes of castor oil, which produced four evacuations; and sixty centigrammes of quinine muriate, given at 7 A.M. of the 24th, were immmediately vomited up.

Condition: Dorsal decubitus; face stupid; apathetic, responses very slow and difficult; movements difficult; prostration of strength; temperature very high, pulse 120 and small; tongue moist and excessively furred; intense thirst and anorexia; liver two fingers' breadth beyond border of ribs, very sensitive to palpation and percussion; spleen increased in size; no abdominal tympanites; pain and gurgling in right iliac fossa; urine scanty and red, no albumen; some cough; no abnormal sounds in respiratory organs; insomnia; some subdelirium.

Prescribed an emetic of infusion of ipecac with powdered ipecac; also:

℞ Quinine, 2 grammes.
Sydenham's laudanum, 12 drops.
Syrup of orange-peel, 30 grammes.
Water acidulated with sulphuric acid, 120 grammes.

To take two tablespoonfuls every hour, after operation of emetic.

Likewise gave a purgative enema; sulphuric lemonade as beverage; two chicken broths.

25th: Patient vomited freely from ipecac; had two large stools. Took the mixture up to 7 P.M., when it was finished. General condition entirely different; face more intelligent, movements more easy, answers more prompt, but required to be spoken to loudly, as he was deaf; complained of ringing in ears; appeared to hear noise of waterfall at a distance; tongue slightly coated, belly painless, liver and spleen less enlarged; still some gurgling in right iliac fossa, but without pain; urine more abundant, but still red. Temperature of skin much less elevated; pulse 88 and fuller. The difference noted in the patient is extraordinary. Ordered mixture of quinine continued, with dose reduced to twelve decigrammes; lemonade also continued; three chicken broths.

26th: Patient sat up in bed conversing with the students and completely apyretic. Complained only of deafness and some auditory symptoms as the evening before. Had appetite and begged for food; tongue large and moist, only slightly coated at base; liver a little enlarged; spleen normal; cough increased; auscultation of chest revealed the presence of some mucous râles scattered through both lungs. Continued quinine mixture, with dose reduced to sixty centigrammes; friction with tincture of iodine to right hypochondrium; two chicken broths and two soups.

On the 27th the patient was still taking sixty centigrammes of quinine; on the 28th and 29th took thirty centigrammes, and used an infusion of polygala with syrup of tolu on account of slight remaining bronchitis.

The diet was gradually made fuller and more nutritious, and he was discharged on the 3d of September, perfectly cured.

Case 2.—Pedro Murati, Italian, bootblack, 40 years old, eight months in Brazil, living in a tavern on the Rua dos Invalidos, was attacked by a chill and fever on June 11th, 1873, at 3 P.M. He was without treatment till the morning of the 13th, when he entered the Mizericordia Hospital and was assigned a bed in the Santa Izabel ward. He reported

*Translated by Surgeon Geo. P. Bradley, U. S. Navy.

that a few days before falling ill he had loss of appetite, was unfit for work, and passed a restless night.

Condition: Great prostration of strength; face despondent and stupid; drowsy when not spoken to; epistaxis. Axillary temperature 104.5°; pulse 108; tongue furred and dry; great thirst; pain in hepatic and splenic region; liver much enlarged, three fingers' breadth beyond right costal border; spleen a little enlarged at upper part; belly doughy and sensitive in iliac regions; no gurgling; some bilious diarrhœa; urine scanty and red, but without albumen and bile-pigment; no cough or râle in respiratory regions; respiration sighing. Some delirium the night before, as reported by a room-mate.

Ordered six wet cups to hepatic region; seventy-five centigrammes of calomel, to be followed in three hours by forty-five grammes of castor oil; one gramme of quinine after patient is well purged.

14th: Patient had six large stools, and took the quinine at 7 P.M. on the 13th. His condition then showed great improvement, his face being more expressive and answers more prompt. No delirium; tongue moist and less furred; temperature 101.5°; pulse 90; liver and spleen much less enlarged; belly soft and painless. At 10 P.M. on the 13th he had copious perspiration. Ordered one gramme of quinine to be taken immediately; simple saline mixture; two chicken broths.

15th: Patient in excellent condition. The evening before, at five o'clock, he was completely apyretic, and the interne thought proper to give him sixty centigrammes more of quinine. Apyrexia continued at visiting-hour; he was very comfortable; asked for food; complained of some deafness and ringing in the ears; liver almost normal in size; tongue coated only at base; urine still scanty and high colored. Ordered sixty centigrammes of quinine; decoction of barley and *gramma** with six grammes of nitrate of potash; three mutton broths.

On the 16th and 17th he was still taking thirty grammes of quinine daily; the urinary secretion was fully reëstablished. After the use of the *Agua de Inglaterra*† for three days, he was discharged on the 22d, the treatment having lasted nine days.

Case 3.—José Lourenço, Portuguese, 51 years of age, employé in the navy-yard, of poor physique, entered the Santa Izabel ward on the 17th of July, 1873. Suffered in his native country from intermittent fever for two years; on coming to Brazil went to reside on a farm at Rio Comprido, where the same fever again appeared; had always been in precarious health and very subject to diarrhœa. On the 15th he had shivering-fits, headache, and great prostration of strength; went to bed at 7 P.M. and could not sleep on account of the severe fever that set in. Took a sudorific on the 16th, which produced no relief; at 3 P.M. of same day he was attacked by diarrhœa, followed by delirium and great restlessness at night, and the following day (17th) was brought to the hospital in a hammock, so extreme was his prostration.

Condition: He seemed almost like an inert body, and the mental disturbance evidenced by subdelirium and drowsiness prevented any questioning; consequently the only history obtained was from two friends who accompanied him. Face stupid; conjunctiva very injected; pupils contracted, reacting weakly to light; great heat of forehead; axillary temperature 104.8°; pulse 126 and small; tongue very dry, with a rust-colored spot in centre; teeth dry and somewhat coated with sordes; belly tympanitic; diarrhœa; pain and gurgling in right iliac fossa; great quantity of sudamina on abdominal walls; liver very much congested—two fingers' breadth beyond costal border, and reaching level of nipple above; spleen about seven inches in its larger diameter; urine very high-colored without albumen; examination of chest was made with great difficulty, on account of prostration, but revealed a respiration-rate of twenty-four and no râles.

Ordered six leeches to each mastoid process, and blisters to calves of legs; seventy-five centigrammes of calomel in three doses; 200 grammes of infusion of chamomile as an enema; fomentations to belly of a mixture of equal parts of oil of chamomile and oil of turpentine. At 5 P.M. less fever (103.6°), intellect clearer, and tongue less dry at tip. The leeches had drawn well, but the blisters had not been sufficiently effective.

18th: Sensible improvement of cerebral symptoms; no delirium from midnight on; answered questions clearly; some drowsiness still remained. The blisters had drawn, and were dressed at 8 A.M. Axillary temperature 104.6°; pulse 112 and fuller; tongue still dry, but without the central spot; liver of same size and more painful on percussion; four evacuations on the 17th, and one this morning; spleen in same condition; abdominal tympanites, pain and gurgling in right iliac fossa still persisted. Ordered six wet cups to hepatic region; fifteen grammes of sulphate of magnesia, to be followed after operation

* *Triticum repens.*

† Cinchona added to the must of grapes, and the mixture fermented — an excellent and palatable remedy.—TRANS.

by one and a third grammes of quinine in two doses; same enema and fomentation; favor suppuration of blisters by use of basilicon ointment.

19th: Face more animated and expressive; movements easier; answered questions more promptly; there was some subdelirium during the preceding night. The saline purgative produced four large stools, and the first dose of quinine was given at 4 P.M., the second at 7 P.M. Temperature 102.6°; pulse 92; tongue still dry; liver less enlarged and less sensitive to palpation and percussion. Abdominal meteorism and pain in right iliac region had ceased, though the gurgling still continued. Ordered sixty centigrammes of quinine at 9 A.M., and tablespoonful doses every hour from noon on of a mixture of one gramme of same in 100 grammes fluid; decoction of *Triticum repens*, barely containing two grammes of nitre, as beverage; same enema and same fomentation; two chicken broths.

On the 20th the patient showed great improvement; the face had completely lost its typhoid aspect; intellectual faculties perfectly sound; sleep the previous night prolonged and calm; two evacuations, one excited by enema; profuse diuresis; urine loaded with urates and chlorides; temperature 100.8°; pulse 86; tongue moist and slightly coated; appetite, patient asking for food. The liver still below the border of the ribs, but above at the level of the sixth rib; spleen still enlarged; belly soft and painless; no gurgling in right iliac fossa. Ordered one gramme of quinine; *Agua de Inglaterra*, half a glass every two hours; continued the nitrated ptisan; discontinued enema and fomentation; dressed blisters with simple cerate; directed three mutton broths and half a cup of coffee.

On the 21st and 22d the patient took sixty centigrammes of quinine, on the 23d and 24th thirty centigrammes. Continued use of the *Agua de Inglaterra* to this latter date, and nourishment was increased. He was now convalescent, having only a certain degree of cachexia due to the malarial poisoning to which he had been long exposed, and which was anterior to the acute disease that brought him to the hospital. By reason of this cachexia, and the congestion of the liver and spleen which accompanied it, he remained in the ward fifteen days longer, using tonics and preparations of iron, and rubbing the hepatic region every day with tincture of iodine.

In order that the course followed by typhoid-malarial remittent fever in the three cases just reported may be compared with that of genuine typhoid fever—the *dothenenteritis* of Bretonneau—observed in the same ward, I present here two cases, by which it will be clearly seen that despite the regular quotidian paroxysms the pyrexia was not of malarial basis; inasmuch as, in the first instance, recovery took place many days after quinine (which had produced no favorable modification in the evolution of the symptoms) had been abandoned; and in the second instance the patient died at the end of the second week with the gravest symptoms of ataxo-adynamia, autopsy revealing all the anatomo-pathological characters of ileo-typhus (abdominal typhus).

Following these cases of true typhoid, I shall present two more of typhoid-malarial remittent in which the patients died. It will be seen by reading the autopsy that both cases were, as I had supposed, of a malarial affection and not typhoid fever. These four cases will complete what I have to say concerning the differences between the two pyrexias, and will emphasize the considerations found in the section devoted to diagnosis; they will fill up any hiatus which might perhaps have existed, and they express the practical reality more precisely and more eloquently than any general description could do.

Case 4.—Joao Pedro de Alcantara, mulatto, aged 35, cabinet-maker, residing in the Rua de Ajuda, was seized with a paroxysm of fever on the 1st of May, 1873, characterized by severe chill, fever, and profuse sweat. This paroxysm occurred at 2 P.M. and terminated at 9 P.M. The next morning he experienced nothing worse than loss of appetite and a bitter taste in the mouth, and went to his shop. At 2 P.M. the paroxysm recurred, characterized like the preceding one, together with very intense headache, which terminated at 11.30 P.M. The third morning, although free from fever, he had heaviness of the head, pains in the legs, and prostration of strength. In this condition he consulted an apothecary, who gave him a dose of quinine and a bottle of lemonade. Despite these remedies the paroxysm returned at noon, and at 5 P.M. the patient came to the hospital. The physician on duty prescribed a purgative of castor oil, and one gramme muriate of quinine, to be taken after action of oil. This attack ended with copious perspiration at six o'clock of the morning of the 4th. It was on this day at 9 A.M. that I saw the patient for the first time.

I found his face dejected, great prostration

of strength, and tendency to sleep; axillary temperature 100.6°; pulse 80; tongue slightly coated at the base, red at the tip; slight thirst; anorexia; abdomen a little tympanitic and painless; no gurgling in iliac regions; liver enlarged, spleen ditto. The night before he had three evacuations, caused by the oil. Urine high-colored, free from albumen. The quinine, prescribed by the physician on duty, had been given an hour before.

Ordered one more gramme of quinine, to be given in two doses; emollient decoction containing four grammes of nitre and eight grammes of soluble cream of tartar; chicken broth.

On the 5th the patient was reported as having had a bad time the day before; was attacked by a fresh paroxysm two hours after I saw him, viz., at 11.30 A.M.; at 5 P.M. the interne found him restless, with subdelirium, a temperature of 104.5°, and pulse of 112; he prescribed a mixture containing tincture of aconite, tincture of belladonna, and laurel-water, and ordered two sinapisms applied to the calves of the legs. Great prostration on the morning of the 5th; patient unable to sit up in bed; temperature 103.3°; pulse 98; intellect dull, expression stupid; tongue dry and red at tip; belly tympanitic; spleen very much enlarged; liver as on preceding day; some diarrhœa; gurgling at right iliac fossa; cough; dyspnœa; mucous râles scattered over both lungs, confluent and finer at base of left lung. Ordered:

℞ Quinine sulphate, 2 grammes.
Sydenham's laudanum, 12 drops.
Syrup of orange-peel, 30 grammes.
Acidulated water, 100 grammes.
One tablespoonful every hour.

℞ Tincture valerian, 4 grammes.
Tincture musk, 4 grammes.
Tincture asafœtida, 4 grammes.
Infusion chamomile, 300 grammes.
For two enemas, to be given six hours apart.

Wine lemonade as a beverage; equal parts of oil of chamomile and oil of turpentine applied to abdomen.

6th: Patient's condition reported bad the day before, especially at night, the temperature having risen to 104.8° at 5 P.M., pulse being 120; the quinine mixture had become exhausted at 4 P.M.; constant delirium. This morning at nine o'clock he was completely apathetic, muttering disconnected and incomprehensible phrases, without paying the least attention to questions; great prostration of strength; axillary temperature 103.3°; pulse 100; tongue dry, retracted, and tremulous; teeth covered with sordes; diarrhœa; belly very tympanitic, painful on palpation, and on its surface some reddish spots (five in number) which disappeared under pressure; gurgling and pain in right iliac fossa; liver more enlarged than evening before—two fingers' breadth below border of ribs; spleen eight inches in greatest diameter; urine scanty, reddish, and free from albumen; cough loose and frequent; great amount of mucous and subcrepitant râles in both lungs, especially base of left; expectoration difficult, sputa mucous and aërated. Ordered:

℞ Ammonia carbonate, 1 gramme.
Tincture musk, 2 grammes.
Tincture hyoscyamus, 2 grammes.
Syrup orange-peel, 30 grammes.
Valerian-water, 100 grammes.
One tablespoonful every two hours.

Also two tablespoonfuls of port wine every two hours, to alternate with the mixture. Enema and fomentation to be continued; blisters to calves of legs.

7th: Condition about the same. The temperature rose the night before to 104.5°, and at 9 A.M. of the 7th was 103°. Delirium had lessened, and the patient was reported as having slept quietly for two hours during the night. The tympanites and the sordes on the teeth were increased; diarrhœa about the same—three stools a day. Continued the treatment as before.

On the 8th and 9th he remained in the same state, having on the latter day extreme tremulousness of upper limbs. The temperature was always about the same morning and evening. On the 8th the temperature at 1 A.M. was 103°, at 2 P.M. 105°; on the 9th at 8 A.M. 102°, at 5 P.M. 104. I replaced the antispasmodic mixture by:

℞ Tincture canella, 4 grammes.
Tincture camphor, 2 grammes.
Soft extract cinchona, 2 grammes.
Diacodium syrup, 30 grammes.
Balm-water, 100 grammes.

Continued the wine, enema, and fomentation; three mutton broths daily.

Perceptible improvement on the 10th; temperature 102.2°; pulse 98; face less stupid; no tremor or delirium; answered sluggishly but clearly; tongue a little more moist at tip; less sordes on teeth; noteworthy diminution of tympanites; palpation of right iliac region not so painful, but still some gurgling at this point. The abdominal spots had disappeared; four evacuations; urine more abundant; cough looser, expectoration easy, mucous râles more abundant. The patient submitted to examination of chest sitting up, only supported by two students. Treatment continued.

Progressive improvement on the 11th. Physiognomy more expressive; patient had

slept six hours continuously the night before. Temperature at 5 P.M. of the 10th was 103°, and at 9 next morning 101.8°; pulse 92. Tongue dry only at centre and base; teeth moist and free from sordes; belly slightly tympanitic and painless even in right iliac region; liver and spleen less enlarged; urine light in color and more abundant; expectoration very easy, cough less frequent. Ordered infusion of chamomile as an enema at night; three mutton broths; coffee; also:

℞ Soft extract cinchona, 8 grammes.
Tincture canella, 4 grammes.
Syrup orange-peel, 30 grammes.
Port wine, 180 grammes.

Two tablespoonfuls every two hours.

Improvement was progressive from this date on, the temperature presenting the same regularity in its decreasing course as was noted in its ascending and stationary stages, viz.: 11th, A.M. 101.8°, P.M. 102.6°; 12th, A.M. 101.6°, P.M. 102.6; 13th, A.M. 101.4°, P.M. 102.2°; 14th, A.M. 101.1°, P.M. 102.2°; 15th, A.M. 100.4°, P.M 101.3°; 16th, A.M. 100.4°, P.M. 100 8°; 17th, A.M. 99.5°, P.M. 100.4°; 18th, A.M. 99°, P.M. 99.5°; 19th, A.M. 99°, P.M. 99.5°. Convalescence was manifest on the latter date, and the temperature remained normal. Alcantara was discharged on the 2d of June.

Case 5.—Fernando Lisboa, Portuguese, 20 years of age, clerk, thin and weakly, had regular and quotidian paroxysms of intermittent fever on the 7th, 8th and 9th of August, 1873. Although seen by a physician, who gave him full doses of quinine, preceded by an emetic, he was much disheartened by seeing the febrile attack reappear at noon of the 10th, with even more intensity than the others, as it came accompanied by vomiting and very severe pains in the head; it was then that he decided to enter the hospital, which he did at 7 P.M. of the 11th.

Face indicated prostration and discouragement; temperature 100.8°; pulse 86, and weak; tongue covered with a very thick coat of yellowish fur; nausea, and vomiting whenever he took water in large amount or broth; thirst; complete anorexia; bowels constipated and a little tympanitic; liver enlarged; spleen normal; urine high-colored and bilious; respiratory organs sound.

Ordered an emetic of ipecac and antimony, one gramme of quinine to be taken after action of emetic.

On the 12th the patient vomited considerably but had only one stool. Took the quinine at 4 P.M. At 6 P.M. the interne found him with high fever, the temperature being 105°, and the pulse 122. At 9 A.M. of the 12th the patient was still febrile (102°), and much prostrated; had not slept at all during the night; tongue still very much furred and dry at tip; great sensitiveness at epigastrium; nausea and much thirst; liver enlarged; urine heavily loaded with coloring matter of bile. Ordered twelve leeches to the epigastrium; seventy-five centigrammes of calomel in two doses; forty-five grammes of castor oil two hours after second dose of calomel; two grammes of quinine in solution with twelve drops of laudanum, three doses with two-hour intervals, after purgation.

In spite of five large evacuations and three doses of quinine, I found the patient worse on the 13th. At 5 P.M. the day before he had a temperature of 105.5°, and high delirium during the night—tried at various times to get out of bed, pretending he was well and did not need to stay in hospital. He was drowsy, answering questions with much difficulty, even when spoken to in a loud voice. Axillary temperature 104.1°; pulse 100 and feeble; tongue completely dry and blackened, teeth covered with sordes; still great sensitiveness in epigastrium; belly tympanitic; pain and gurgling in right iliac fossa; spleen enlarged; liver decreased in size; urine less bilious; no cough; subcrepitant râles at base of both lungs. Directed twelve leeches to be applied to the mastoid process; blisters to thighs; bathing the whole body with aromatic vinegar twice daily.

℞ Quinine sulphate, 2.6 grammes.
Tincture musk, 2 grammes.
Tincture belladonna, 2 grammes.
Syrup orange-flowers, 30 grammes.
Water acidulated with sulphuric acid, 100 grammes.

One tablespoonful every two hours.

℞ Tincture valerian, 8 grammes.
Camphor (dissolved in alcohol), 2 grammes.
Asafœtida, 4 grammes.
Yolk of 1 egg.
Infusion of chamomile, 300 grammes.

For enemas at six hours' interval.

14th: The patient passed the night restless and delirious; at 5 P.M. the axillary temperature was 106.2°; after the bathing it lowered only four-tenths of a degree. I found him in dorsal decubitus, with face stupid, eyes half-closed, and subdelirium; temperature 105.2°; pulse 130, very small and feeble; tongue like a piece of broiled meat, teeth covered with sordes: abdominal tympanites; bowels constipated; both spleen and liver enlarged; acute pain in right iliac fossa, but no gurgling; bronchial râles continued. The urine could not be examined, as patient passed in bed. Ordered forty-five grammes of sulphate

of magnesia, to be divided into six doses, one every hour; and after it had acted, two tablespoonfuls every hour of good port wine; bathe three times a day with aromatic vinegar; two more blisters to calves of legs; continue enemas.

On the 15th, 16th, and 17th, he grew progressively worse, and the evening temperature reached 106.8° on the second-named date. Other grave ataxic symptoms appeared, such as carphologia, crucidismus, and subsultus tendinum. On the 15th the sulphate of magnesia was suspended; the port wine was continued, half a glass every two hours; camphorated decoction of cinchona, 300 grammes, for the enema; four baths daily with aromatic vinegar; and the following:

℞ Soft extract cinchona, 8 grammes.
Sulphuric ether, 4 grammes.
Tincture castor, 2 grammes.
Syrup orange-peel, 30 grammes.
Canella-water, 180 grammes.

One tablespoonful every half-hour.

The condition was not perceptibly changed on the 18th, 19th, and 20th. The port wine was replaced by ninety grammes of *Agua Ardente de Canna* (a spirit distilled from the sugar-cane) diluted with the same quantity of water.

On the 21st a very profuse and frequent diarrhœa appeared, which caused me to prescribe a mucilaginous opiate drink.

Profound adynamia on the 22d, with subdelirium, convulsive tremor of upper limbs, carphologia, crucidismus; temperature 104.5°; pulse small, feeble, 120; tongue blackened and extremely dry—could not be moved; teeth covered with sordes; tympanites and diarrhœa; spleen enlarged and liver two fingers' breadth below border of ribs; respiration shallow and frequent; no cough; sibilant and subcrepitant râles in both lungs. At 6 P.M. the patient was comatose, with cold extremities, and bathed in clammy sweat; axillary temperature 103°, and pulse so small and frequent that it was impossible to count it. At 9 P.M. he died.

Autopsy made at 10 A.M. on the 23d showed rigor mortis; leech marks on mastoid processes and epigastrium; marks of blisters on thigh and calves of legs; injection of arachnoid and cerebral tissue; no sub-arachnoid or intraventricular effusion; congestion of base of lungs; catarrh of bronchi; heart flabby and softened, a large clot in left auricle; stomach much distended by gases, its mucous membrance injected, with reddish patches, and covered with a thick layer of catarrhal mucus; liver enlarged, hyperæmic, giving forth a great amount of black blood from the cut surfaces; gall-bladder full of thick and blackish bile; spleen very large, softened, breaking down easily under pressure; intestines much distended by gases, their mucous membrane injected, especially in part corresponding to jejunum and ileum. The *agminate glands* (Peyer's patches), as well as the isolated glands of Brunner, presented various degrees of change. At some points the follicles were turgid, hypertrophied, hard, and resistant to touch; those of Brunner appeared as small elevations, sometimes conical, sometimes rounded, scattered indiscriminately over the entire circumference of the small intestine. At other points, particularly in the upper part of the jejunum, the patches were covered with a blackish punctation, resembling in appearance a recently shaven beard.* In the lower half of the ileum many ulcerations were observed, of various form and aspect; in the upper half of this part of the intestine only seven ulcerations were present, in the jejunum barely one,—these ulcerations were oval, elliptical, and circular, according to the kind of follicles ulcerated, some of great size, others very small. In only two had the ulcerative process gone beyond the mucous membrane. The ileo-cœcal valve was turgid, red, and hardened; the mesenteric glands large, reddish, and a little softened. Neither the kidneys nor the bladder revealed anything abnormal.

Case 6.—Roberto Garcia, Spaniard, aged 40, caulker, residing in an inn on the Prahia de Ganboa, was attacked by an algid pernicious paroxysm in 1870, for which he was treated in the University Hospital; in 1872 he had confluent smallpox, for which he was treated in the pest-house. From this time on he never enjoyed good health; had a sensation of deep-seated pain in præcordial region, frequent palpitations of the heart, and when exercising quickly or ascending stairs had oppression and dyspnœa. On the 24th of June, 1873, in spite of this indisposition, he took part in a supper given by some friends, and ate and drank to excess. On the dawn of the 25th he had a severe chill and profuse vomiting, rejecting the food he had taken, some of which had not undergone chymification. At 8 A.M. he was much prostrated, with high fever; was seen by a physician, who attributed all the symptoms to indigestion, and prescribed a purgative of

* "*Revestem-se em sua superficie de am pontilhado denegrido, assemelhando se ao aspecto de uma barba recentemente feita.*"

castor oil, to be followed after operation by a mixture containing tinctures of chamomile and nux vomica. He felt better after purging, but became worse in the afternoon, and at night could not sleep—was restless and had high fever. His physician then gave a sudorific, and on the .26th prescribed some pills, which were taken in the afternoon and during the 27th without much benefit. On the 28th he came to the Mizericordia Hospital.

There was great prostration of strength; axillary temperature 103.1°; pulse 92; tongue furred and dry in the middle; intense thirst and anorexia; liver extremely enlarged, reaching four fingers' breadth below lower edge of ribs; spleen enlarged; the hypochondria, especially the right, painful on palpation and percussion; some abdominal tympanites, and bowels constipated; urine scanty, red, and albuminous; respiratory organs natural.

Twelve leeches to anus were ordered; six wet cups to hepatic region; one gramme of calomel in two doses, the second to be followed in three hours by forty-five grammes of castor oil; twelve decigrammes of quinine in solution in two doses, at three hours' interval, to be taken after free catharsis.

On the 29th he was better; had purged abundantly; the liver much decreased in size, tongue moist, temperature 101.5°, pulse 90. The urine still contained albumen, but in less amount. Cinchona deafness. Ordered twelve decigrammes of quinine in solution, to be given in two doses, three hours apart; decoction of parietaria* and *Triticum repens* with four grammes nitre and eight grammes soluble cream of tartar; two chicken broths.

The patient proved to be in a very grave state on the 30th. At 3 P.M. the previous day he began to be restless; at five o'clock he was delirious, with tongue dry and tremulous, temperature 105.5°, pulse 120. A mixture was prescribed containing acetate of ammonia and tinctures of aconite and belladonna; blisters to calves of legs; enema of electuary of senna, asafœtida, and tincture of musk. Next morning at nine o'clock his face was stupid, and intellect abolished: subdelirium; tongue very dry and tremulous; teeth dry; liver again much enlarged, reaching the same limits inferiorly as on the 28th; spleen also enlarged; tympanites; involuntary evacuations, consisting of a bloody fluid of dark color; temperature 104.5°; pulse 108. Ordered six leeches to each mastoid process; decoction of cinchona, 180 grammes, for two enemas; also:

℞ Quinine sulphate, 2 grammes.
Tincture musk, .2 grammes.
Tincture hyoscyamus, 2 grammes.
Syrup of orange-peel, 30 grammes.
Water acidulated with sulphuric acid, 150 grammes.

One tablespoonful every hour.

At 5 P.M. his extremities were cold, though the temperature in axilla was 106.2°; pulse 136, small and thready; a profuse hot perspiration covered his entire body; profound coma, attended by stifled and oppressed respiration, indicated but a few moments of life remained. He died at 8.30 P.M.

An autopsy was made on the morning of July 1st, and disclosed: Rigor mortis; marks of leeches on mastoid processes, of wet cups in right hypochondrium, of blisters on calves of legs; great turgescence of sinuses of dura mater and white matter of brain; hyperæmia of choroid plexus and velum interpositum; some effusion of bloody serum in lateral ventricles; lungs healthy. Effusion of about sixty grammes of serum in pericardium, which latter was remarkably thickened and partially adherent to heart at points corresponding to left ventricle; three very thick, milky patches in cardiac layer of same; excentric hypertrophy of both ventricles; thickening of aortic valves; thickening and roughening of inner tunic of aorta in ascending portion, arch, and descending portion, to a finger's breadth below origin of left subclavian. Liver very much enlarged, swollen with blood, friable, tearing easily under pressure; spleen much increased in size, likewise friable and softened; kidneys very congested; stomach almost empty, containing one spoonful of yellowish fluid, some redness of mucous membrane. The intestines, carefully examined from the duodenum to the rectum, presented nothing noteworthy excepting some injection of the vessels of the mucous membrane in the duodenum, jejunum, and transverse colon; in this portion of the large intestine a dark, almost black fluid was found, evidently bloody, resembling that passed by stool in the last hours of life.

Case 7.—Camillo Ferreira Dos Santos, mulatto, 50 years old, cabman, entered the Santa Izabel ward August 3d, 1869, with all the apparent symptoms of alcoholic cachexia. For a long time had been an excessively hard drinker—almost always intoxicated. On June 28th he was drunk, and slept a great part of the day exposed to the sun in the Campo da Acclamaços. Was taken home at 3 P.M., and two hours later experienced a severe chill, followed by fever; slept profoundly all night, and awoke bathed in perspiration. He tried to work on the 29th, but

* Wall pellitory—esteemed as a diuretic.—ED.

was not able, being very much prostrated, with pains in legs and head. At 11 A.M. he again had chills, followed by fever. Remained feverish throughout the 30th and 31st and August 1st and 2d, taking nothing, however, but a sudorific prepared with rosemary and wine, a purgative of castor oil, and another of salts. At night he was delirious, became restless and noisy, and on the morning of the 3d tried to escape from the house, believing himself threatened and pursued.

His face was puffy; eyes injected, but without expression. Knew no one, not even the companion who accompanied him to the hospital. Constantly in a state of subdelirium. Epistaxis; tongue dry, with great redness at tip and edges; great sensitiveness in epigastrium and right hypochondrium; liver extremely large and indurated; belly tympanitic; gurgling in right iliac fossa; profuse bilious diarrhœa; spleen enlarged; temperature 103.6°; pulse 106; strong heart impulse, with rough systolic bellows-murmur; subcrepitant râles at base of both lungs.

Prescribed sulphuric lemonade as a beverage; blisters to calves of legs; calomel, sixty centigrammes; two grammes of quinine in solution, to be taken in three doses.

The following day there was complete apathy, the face being stupid. He lay in the dorsal decubitus with eyes half-open, and failed to reply to questions, though now and then uttering disconnected words; took long and deep inspirations. The night before, the interne found him delirious and very hot, but temperature was not taken. Temperature at 9 A.M. on August 4th was 110°; pulse 122. Tongue on its upper surface exhibited some longitudinal clefts, whence oozed blood that coagulated; the epistaxis had reappeared, but on a small scale. Other symptoms continued much the same. Ordered muriatic lemonade as a beverage; two enemas of decoction of cinchona and tincture of chamomile; valerianate of quinine, one gramme, divided into three doses to be taken two hours apart.

Far from improving, he grew worse from day to day. On the 6th, coma supervened, lasting till 5 P.M. of the 7th, when death took place, preceded by tracheal râles.

I made use of wine and a diffusible stimulant mixture in the last two days of the disease, without any result.

The autopsy was made on the morning of the 8th, and revealed: Marks of blisters on calves of legs; incomplete rigor mortis; noteworthy thickening of dura mater and arachnoid; anæmic pallor of white substance of brain, as also of gray matter; lessening of consistency of anterior lobe of left hemisphere of cerebrum; great congestion of lower lobe of right lung, two hæmoptoic nuclei in upper lobe of left, firm pleuritic adhesions on back sides; effusion of about thirty grammes of blood and serous fluid into pericardium; atheromatous degeneration of aorta, with dilatation of ascending portion; fatty alteration in heart, especially right ventricle; valvular apparatus sound; stomach distended by gases, its mucous membrane much thickened and ash-colored and easily detached from the muscular coat by pulling with handle of scalpel; liver much increased in size, at some points congested, at others yellowish or sulphur-colored, at others pigmented with a color of mustard flour; gall-bladder almost empty; spleen enlarged, softened, breaking down easily; kidneys yellowish, with evident characteristics of steatosis; intestines without appreciable alteration.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 177.*]

The physiology of the Iatro-mathematical, or Iatro-mechanical, or Iatro-physical school devoted chief consideration to the solid parts of the economy, whose form and function it strove to discover and demonstrate by the aid of exact methods—that is, by calculation and physical apparatus. Thus it explained digestion as mechanical trituration; secretions were referred to variation in resistance of parts in the vascular system; warmth was supposed to be due to friction of the blood-corpuscles; health consisted in the undisturbed performance of the physical and mechanical processes of the body. Diseases were explained inversely: the blood, under diseased conditions, was held to contain pointed and angular crystals which irritated as they passed through the pores, or disturbed because they could not so pass.

The first to enunciate these views was Santoro, or Sanctorius, who flourished from 1561 to 1635, and was for a while professor at Padua. He taught how to investigate the pulse by an instrument of his own

*Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

contrivance, and how to study the temperature by means of a species of thermometer, which was probably his own invention. (This instrument, by the way, was invented about this time; Drebbel (1572–1634) is regarded as the inventor of the air thermometer, Galileo (1574–1642) of the spirit thermometer, and Roemer (1644–1710) of the mercurial thermometer.) Santoro studied the phenomenon of transpiration and constructed apparatus for bathing bed-ridden individuals; he found that in twenty-four hours the insensible transpiration through the skin amounted to 1¼ kilogrammes—which result, compared with the results of the present day determined by the most complete observations, is only twenty per cent. too high, and proves how accurately he investigated. The important rôle of the perspiration, which he pointed out, was made use of by the iatro-chemists to vindicate their terrific sweat cures.

Borelli (1608–1679), of Naples, is usually regarded, however, as the founder of the iatro-mechanical school. Of a quarrelsome disposition, he could not stay long in any one place, though he ultimately settled in Rome, where he joined the circle of savants who gathered around Christina, the daughter of Gustavus Adolphus, who had become a convert to Catholicism. Finally Borelli entered a monastery. His services related mainly to physiology, where, like Descartes, he followed purely mathematical principles; he explained the action of the muscles by the laws of the lever, calculated the mechanical work done by the heart, and correctly ascribed inspiration to muscular action. He was the opponent of iatro-chemistry, and claimed there was no such thing as corruption of the blood. His pupils and followers—like Belini (1643–1704) of Florence, who became professor in Pisa at the early age of nineteen, and Baglivi (1668–1707), a pupil of Malpighi and a man of universal education—carried out and elaborated the first expressions of his author. Borelli was the author of the oft-quoted maxim, "He who diagnoses well, cures well."

The iatro-mathematical system held ground for some time in Italy, and also found followers elsewhere. For instance, Dodart (1664–1707), of Paris, explained the voice on the mechanical principles enunciated by Borelli and Quesnay (1694–1774), the first permanent secretary of the Academy of Surgery in Paris. In England this explanation was adopted by a number of followers, none of whom, however, was eminent enough to justify special mention here. In Germany it obtained a certain amount of favor, but seems not to have attracted any very eminent disciples.

The iatro-mechanical school ran a course not unprofitable to science, yet was unfruitful of real advance in the domain of practical medicine. The man of this particular age who, more than any other, exerted an influence destined to be prolonged even to the present time and probably much longer, who had a cool, clear, and unprejudiced spirit, and who sought the true value of medicine and recompense for the same in the benefits which it brings to the sick, without scorning or neglecting its scientific side, was Thomas Sydenham, born at Winford Eagle in 1624, a student at Oxford in 1642, and recipient of a bachelor's degree of medicine in 1648. The next fifteen years of his life we know practically nothing of, save that he spent some time in Montpellier pursuing his medical studies. In 1663 he became a member of the Royal College of Physicians, but did not take his degree of Doctor until 1676, thirteen years before his death. His chief work, "Medical Observations," is said to have been originally written in English and translated into Latin; it first appeared in 1666, the year when fire and plague devastated London. He died of gout in 1689, and was buried in Westminster Abbey. During the earliest years of the plague in London he fled, as was the general custom of that day.

His model was Hippocrates. In pathology he was a humoralist without being a theorist. He knew only one standard—observation and experience. Sharing the opinions of his day, he laid but little weight upon anatomy and physiology, yet he recognized their value when employed in the production of hypotheses. He conceived of disease as active, operative, a natural effort of the body to remove morbid material from the blood; if this effort is violent and speedy, we have to do, he says, with an acute disease, but if slow and difficult the condition is chronic. Fever was

supposed to result mostly from cold or from epidemic influences. As causes of disease he considered unknown influences and changes of the atmosphere very important. In his special pathology, "inflammation of the blood" played the chief rôle, and upon it were made to depend nearly all acute and some chronic diseases. He arrived at what he called the Healing Power of Nature, for which he made great claims in his description and observation of epidemics; but he believed there always remained a good deal for the physician to do, and in treating syphilis he even gave mercury until two kilogrammes of saliva were discharged daily. As compared with the therapeutics of that day, his were manifestly simple, and yet he employed, for example, eighteen different herbs in one prescription, and that merely an ointment. The unreliability of the action of drugs induced him to rely upon specifics, as did Paracelsus, but he acknowledged only one such—the then new discovery, cinchona,—not even allowing mercury such a position in the treatment of syphilis. Such drugs as he chose were mainly from the vegetable kingdom.

The great importance of Sydenham and all his statements, so far as we are concerned, centres about his struggle for the elucidation of the healing power of Nature, and for simple observation and simpler treatment, as opposed to the overgrown luxuriance of previous systems and theories. He became the standard-bearer of his age in his return to Hippocrates' method and art of healing, which are founded on the nature of things and on the limits of human ability.

Sydenham was vehemently opposed by Richard Morton (1625–1648), of London, who, like Fernel, considered all diseases to be a poisoning of the vital spirits. Sydenham was also antagonized by Gideon Harvey, who ridiculed his medical contemporaries without stint, because most of them for febrile disease gave cathartics from the second day, and began treatment with emetics. With delightful satire Harvey divided the physicians of the day into six classes: the Ferrea, Asinaria, Jesuitica, Aquaria, Laniaria, and Stercoraria, according as their favorite systems of treatment were the administration of iron, asses' milk, cinchona, mineral water, venesection, or purgatives.

Sir Thomas Browne (1605–1682), who still enjoys a great reputation, was the author of the works entitled "*Religio Medici*" and "*Inquiries Into Vulgar and Common Errors.*" The latter appeared in 1646, but does not seem to have protected its author from the worst error of his age, viz., superstition, since in 1664 he swore that two condemned old women were actual witches.

Having considered the progress of medicine during the seventeenth century, it may be well to glance likewise at surgical progress. Among the Italians, Santoro, already spoken of as the inventor of various instruments, should be mentioned; also Valsalva, who obtained a sound reputation as an operator, employed the ligature, and recommended a starvation plan for treating aneurism; Magati (1579–1647), who contended against the abuses of treating wounds by filling them with plasters, balsam, poultices, tents, etc., and of changing the dressing several times a day—once in four days was better, he said; Severino (1580–1656), first a lawyer, then a professor at Naples, and later an eminent surgeon, a good anatomist, and a particular friend of the actual cautery; Marchetti (1589–1673), a bold, versatile operator of Padua; and Borri, of Milan (1625–1695), skilled as an operator and oculist, but better known because of his sad fate, since he died in the prison of the Inquisition after a prison life of twenty-five years, on account of too liberal religious views. There were also numerous other Italian surgeons who made a name, especially in plastic surgery, and particularly in that branch of it named rhinoplasty, by whose efforts one method of manufacturing a new nose came to be known as the "Italian method."

France, we must remember, was the home during this century of Richelieu, Mazarin, Louis XIV., Corneille, Racine, Molière, Fénelon, La Fontaine, Boileau, Bossuet, and many other men eminent in literature and science. During this century the French laid the foundation for that leadership in surgery which they maintained for nearly two centuries. Let us mention among their surgeons Morel, who invented the tourniquet at the siege of Besançon in the year 1674. There was also Jean Baptiste Denis (who died in

1704), physician to Louis XIV., who performed the first transfusion of blood in man. (Transfusion of the blood of the young into the veins of the old, for the purpose of rejuvenation, was recommended by Libavius in 1715, and Colle of Padua gave it new support by describing a method for its performance. In 1729 Boyle practiced transfusion on dogs. The London faculty sought the value of the operation after excessive hæmorrhage, and Edmond King, physician to Charles II. in 1665, practiced transfusion from vein to vein. But Denis was the first to carry out the operation with lamb's blood upon a patient sinking under excessive venesection, an operation which was very much abused at this time.) It was in this century that the French family of lithotomists, the Collots, distinguished themselves in their special line. The last member of the family, François, died in 1706. Their specialty must have found at that time considerably more material than comes to the front to-day.

Among the general surgeons of France were DeMarque (1618), who distinguished himself as a bandager; Bienaise, who invented the bistoury caché (1601–1631); De Launay (1649), monk and lithotomist; Goursaud, who survived his century, and who was the first to describe stercoral incarceration; Duverney, who demonstrated the growth and nutrition of the bones by periosteum; Lambert, who practiced injections in hydrocele; Andry, of Lyons, who wrote of orthopedic surgery and originated the name *orthopedics;* Pierre Dionis (who died in 1718), surgeon to the Empress Maria Theresa, famous in his art, and who first emphasized the effects of rickets upon the pelvis; and Boulot, better known as Beaulieu (1671–1714), who advanced himself from being a soldier and a day laborer to become a physician, a famous lithotomist and surgeon; he finally joined the Franciscan order, where he obtained the name of Frère Jacques, under which title he passed for the inventor of lateral lithotomy. Then there were Saviard (1656–1702), surgeon-in-chief in the Hôtel Dieu, who, among other things, determined the seat of hernial strangulation to be often in the neck of the sac; and Georges Mareschal (1658–1736), surgeon to Louis XIV., one of the founders of the Academy of Surgery, who has a record of eight lithotomies performed in half an hour, and who became famous for his services in improving the schools of surgery in France.

In this (the seventeenth) century also, ophthalmology was much cultivated in France, although it was assigned to the despised surgeons. Those who won most renown in this line were Maitre Jean and Brisseau, who divide the honor of first recognizing the seat of true cataract. During this period also Duverney, professor of anatomy at Paris, was the first to systematically describe diseases of the ear in accordance with their anatomical seat.

In Spain scholarship sank more rapidly during this century than among any other people in history, due mainly to the loss of their political supremacy and their commerce to the Dutch and English, and to the utter failure, at home, of their efforts to introduce true unity of faith. In these efforts the industrious Moors were excluded under Philip III. In art they maintained their standing, —attaining, in fact, in Murillo, the acme of their fame; but in other branches of industry they rapidly degenerated. Students of history will readily understand how little leisure the Spaniards had at this time to devote to the cultivation of science, including medicine and surgery. Of the two men who are mentioned during this century as Spanish surgeons, namely, Almeida and Ayala, we know practically nothing.

The Germans gained no such store of knowledge from their experience during the Thirty Years' War as did the French during their campaigns. The barber-surgeons, for the most part, still reigned supreme, and their guild contained some men of ability and independence of thought. The most notable man of the times was Fabricius Hildanus (1560–1634). Of him, however, I have already spoken as belonging rather to the previous century. He was the first learned German surgeon recognized and esteemed as such by his contemporaries. He was distinguished also as an oculist and aurist, and removed a particle of iron from the cornea by means of a magnet. A man of great operative genius, and a born surgeon, was Purmann (1648–1721), who greatly lamented the low condition of surgery in Germany, and regarded a knowledge of anatomy as the

prime requisite for the surgeon; he employed the speculum in the diagnosis of syphilis, although it has been Ricord's boast that this was his own idea. Scultetus (1595–1645), of Ulm, was a famous surgical writer of this period, and a bandage of his devising is still in frequent use and bears his name. Muralt, of Zürich, was also a capable surgeon (1655–1733).

The Dutch had but few men during this century who enjoyed any reputation as surgeons. The best among them was Rau (1658–1719), who, from being a poor boy, became a barber, traveled extensively, and was finally made professor of anatomy and surgery in Leyden, where he introduced the innovation of teaching practical surgery upon the cadaver. He was especially famous as a lithotomist after the method of Frère Jacques, although he did not give instruction on this subject in his lectures.

By the way, it is an interesting fact that the clinical histories of many operations for stone during the seventeenth century were related in verse and illustrated with plates. Harvey's vivisections were also related in verse.

Now for the first time do we begin to hear of English surgeons and English surgery. The most prominent, as well as almost the earliest, was Richard Wiseman (1595–1686), ordinary surgeon of James I., called sometimes the "Pride of England" and sometimes the "Paré of England"—a bold, judicious operator, who took hold of every novelty, and who accepted the ligature of Paré (always having the actual cautery at hand, in case the ligature should fail); he also amputated through sound parts, favored operating for strangulated hernia, and employed the trephine zealously. The first recorded operation for external urethrotomy for the relief of stricture is mentioned in Wiseman's writings.

Besides him there were William Cowper (1666–1709), a famous anatomist and surgeon; and Woolhouse, a famous but ignorant itinerant oculist. Sir Christopher Wren, architect of St. Paul's, was the first who devoted attention to injecting medicine into the veins—a subject studied again much later, and recently once more taken up. His example (in 1667) was followed by others, whose experiments demonstrated, as we know to-day, that the effects which follow the intravenous administration of drugs are the same as follow administration by the mouth.

Midwifery during the seventeenth century advanced even more rapidly than its mother-science surgery. The accouchment of women was entrusted in many cases to the care of educated men, who contributed not a little to the art. Anatomy and physiology contributed also their quota to a clearer knowledge of these diseases. The obstetric forceps were for so long a time kept secret that they were of small benefit at first to the obstetric art. Among the French who were especially prominent as promoters of midwifery must be mentioned Marguerite de la Marche, chief midwife of the Hôtel Dieu; François Mauriceau, president of the College of St. Côme; Jules Clement de Lamotte, who was also a skillful surgeon; and Portale, who first proposed version by one foot. Among the Germans a few midwives distinguished themselves as independent observers, most of all Justine Siegemundin, daughter of a minister, who devoted herself to midwifery with such success that she became court midwife; she recommended puncture of the membranes for the production of artificial delivery, and especially advocated bimanual version.

But perhaps the most significant advances were made in the direction of studies in anatomy, physiology, and pathology. The history of the circulation we have already taken up. After Harvey's time, and largely because of his researches, physiologists were divided into two parties with regard to the origin of life. These parties were known as Animists and Animalculists. It was largely by the later researches of Highmore (1613–1685) upon the anatomy of the testis and the epididymis, supplemented by those of Aubery in Florence concerning the ovaries (which had been previously considered as female testicles), and the researches of Stenon concerning the muscular nature of the uterus that a better knowledge of reproduction was established. De Graaf (1641–1673), a physician of Delft, Holland, pointed out the ovarian follicles, known to-day under his name, while Swammerdam (1637–1686) studied the comparative anatomy of the

ovaries—and was, by the way, the first to prove that the queen bee is a female. Needham, the London anatomist and physician, and Hoboken of Utrecht, described more accurately the placenta and the coverings of the ovum.

Anatomical discoveries crowded along about this time. For instance, Wharton (1610–1673) discovered the submaxillary duct, named after him; Glisson (1647–1671) studied the liver and recognized its capsule, that still bears his name; Nuck injected the lymphatics with quicksilver, and studied the glands especially; Stenson discovered the excretory duct of the parotid, and Rivinius (his name being translated in German Bachmann) found the sublingual duct; Peyer, Schafhausen, and Brunner, the latter a professor in Heidelberg, discovered the intestinal glands which bear their names; Wirsung of Bavaria (who was assassinated in 1643 by another physician) discovered in the dissecting-room of Vesalius, at Padua, the excretory duct of the pancreas; Pacchioni found the bodies named after him in the dura mater; Havers, of London, discovered the synovial glands and the so-called *Haversian* canals; Cowper, already mentioned, discovered the small glands named after him, located in front of the prostate, and Bartholin yet other glands, in the labia, which bear his name; Meibom, professor in Helmstadt, discovered the small glands in the eyelids which are named after him. Besides these, many other discoveries might be recorded here, did time permit. One other, however, deserves to be mentioned, with which the name of Schneider (1614–1680) must always be honorably connected. He described the mucous membrane of the nose and demonstrated anatomically and clinically that not the brain, but this membrane, secretes the mucous discharge during fluxes from the nose. This overthrew at once and forever the ancient doctrine, which included so many and various "catarrhal" diseases. I might add also that the best and most complete description of the entire central nervous system which had been given up to this time was furnished by Vieussens.

By the middle and latter portions of the seventeenth century most of the better physicians and surgeons had either assumed offices and positions in which they were supported by the State, or were settled in permanent residences; which was not the case with the mass of physicians in the sixteenth century. As a result the reputation of the entire profession began to improve, while the unlimited license and absolute freedom of practice prevailing during the Middle Ages were almost entirely done away with. By this time the clerical element had disappeared almost entirely from medical circles, or only dabbled in certain specialties. The Thirty Years' War was fatal to the supremacy of the clergy in matters of public health. Moreover, the increase of international intercourse favored the communication of medical knowledge.

The physicians of this period were more occupied with chemistry and physics than had ever been the case before. Nevertheless this was also the special age of *alchemists* and of *impecuniosity*. According to one of the classifications of the time, the regular profession was supposed to include physicians, surgeons, barbers, regimental surgeons, lithotomists, bath-keepers, midwives, nurses, apothecaries, druggists, and even confectioners and grocers. Another list of impostors and quacks, equally official, was made to include old women, village priests, hermits, quacks, uroscopists, Paracelsists, Jews, calf-doctors, executioners, crystallomansers (a class of people—chiefly Italian—who sought after crystals), mountebanks, vagrants, magicians, exorcists, monsters, rat-catchers, jugglers, and gypsies. Veterinary physicians were also at that time included in this class.

Anatomy was now studied more from human bodies, and was authorized by statute. This was especially the case in non-German institutions, to which for this reason students flocked in great numbers. In Dresden so early as 1617 there was a dissecting-room in which stuffed birds, at that time a great rarity, and similar curiosities were preserved. The study of anatomy was at a low ebb in Germany; so that when Rolfink, in 1629, arranged at Jena, which was then the most popular German university, for two public dissections upon executed malefactors, it was considered such an event that the very highest authorities were present. But the peasantry took such fright at this occurrence that for a long

time afterward they watched their cemeteries by night lest the corpses should be dug up and, as they said, "Rolfinked." Vienna did not possess a skeleton until 1658. Strassburg obtained one of a male in 1671, and several years later one of a female. In Edinburgh an anatomical theatre was first erected in 1697 in Surgeons' Hall. It is worthy of remark that anatomical plates, designed to be lifted off in layers, existed even at this period. About the middle of this century there arose a dispute at the bedside of the Margrave of Baden between two learned professors and the regular court physician, whether a plaster to be applied over the patient's heart should be placed in the middle of the chest, according to Galen, or upon the left side. The dispute was settled by opening before the eyes of the noble patient a hog, by means of which it was demonstrated that as a matter of fact the heart of the hog lay on the left side. So convinced was His Excellency that he dismissed the ordinary physician, who had held a contrary opinion as to the position of a nobleman's heart.

The general barbarity and immorality of this century were conspicuous, especially among the upper classes, and by its close had spread from France, become naturalized in both Germany and Italy, and extended even to the universities, their professors and their students. The life of the latter during this period was more vulgar and rude than ever before, and almost more so than ever since. Pennalism—that is to say, barbarity toward junior students—became unbounded, so that outbreaks occurred even during lectures. At last the State authorities were compelled to interfere. Students' outrages were very frequent and often fatal, and their outbursts were disgraceful in the extreme.

Only in France was instruction in surgery well regulated, for this was the only country which possessed a proper surgical college. Practical instruction was imparted to midwives—in Paris through a special institution, in Germany through the Midwives' Guild; the barbers, too, continued to receive instruction from their guilds; while instruction in pharmacy was given by the master apothecaries, too often dogmatically and even farcically, serving as objects for the keen satire of Molière. The expenses of graduation were very great, and the ceremonies sometimes lasted two days!

In another way this same seventeenth century might be characterized as one of aggrandizement for physicians—that is, as one during which their position was improved in the eyes of the public and better supported by the State. The physicians proper, the "*medici puri*," were still persons of the profoundest gravity, with fur-trained robes, perukes, canes and swords when matters were prosperous, who for their lives would do nothing more than write prescriptions in formal style, everything else being considered beneath their dignity—even as they affect in England to-day. They demanded to be called in every case, however, even though they knew nothing about it, claiming that only by means of their presence could things certainly go right. Nevertheless in dangerous cases—for example, during the plague—they left the surgeons alone while they looked upon the sick through the windows. In spite of this, however, they were generally esteemed and often sought for, as well in public as in private. Some of them were supplied with large libraries by their patrons or through their positions under the government, and most of them enjoyed moderate prosperity. Their pay was for the most part regulated in accordance with a definite tariff, while the State gradually cut down the doctor's honorarium to the pay of a day laborer. During that century a certain physician to a countess in Munich received $25 as his annual stipend. For being present at a post-mortem and rendering an opinion thereon, each physician received $1.75. Surgeons who were zealous and eager were always highly esteemed; they were often better educated in many respects because of their extensive travels; but the social emancipation of the surgeons was not completed until the eighteenth century. About this time amputation of the arm was supposed to be worth 31 marks ($7.75); of the leg, 41 marks, or, if a patient died, half this price. Lithotomy cost 51 marks, or half of that if the patient died. For cataract operation on one eye the surgeon received 17 marks; for a like operation on both eyes, 25 marks.

We find in medicine, as in other branches of knowledge, that each succeeding century

presents its added quota of imperishable facts, making it still more important than its predecessor. We may say that the fifteenth century had prepared the way for a reforming idealism which was the principal characteristic of the sixteenth; and that in the seventeenth century the realistic reaction against this same idealism showed itself in the Church and the State by struggles against constituted authority, and in medical science by the domination of inductive philosophy. The idealism of the eighteenth century was not reformative and humanistic, but revolutionary and humanitarian. The unsettled character of the century's events may be charged in some degree to the American and French revolutions, with their interpretation (and their attempted attainment) of the so-called "rights of man." The masses were now supposed to be released, and philosophers created new doctrines which had a greater influence upon the times than ever had philosophical doctrines before. Rousseau, for instance, aroused a revolution in politics and education, and skeptics and materialists alike strove for general enlightenment, which was sadly needed. Among the higher classes extravagance and immorality prevailed extensively; among the lower classes poverty and ignorance. In Germany the rulers even sold their subjects, as when Hesse-Cassel sold to the English 1700 mercenary soldiers, and other States sold smaller numbers. A criminal code, published in 1769, contained seventeen copper-plate engravings illustrating various methods of torture. A physician was always present when torture was inflicted, to see that the victim's sufferings were not greater than he could bear. This inhuman mode of eliciting testimony was last practiced in Europe in *1869*, in the Swiss Canton of Zug. Popular education was a myth, and the children of bondmen were not permitted to learn. No wonder the French Revolution was hailed with joy along the Rhine, where it swept away at once and forever the petty rulers, abbots and bishops who were the "blood-suckers" of the people. The numerous wars of the century had no great influence upon the development of medicine, except in the direction of surgery.

The eighteenth century was revolutionary also in the introduction of freedom of religious thought, so that clerical physicians disappeared entirely from the ranks, save a few who officiated as lithotomists like Frère Côme, or as oculists like Wrabetz, the latter of whom was even a professor in Prague.

This was the century, too, of Leibnitz and Kant, of Linnæus and Lavoisier, as well as of Bach, Hayden, Beethoven, and Goethe. During it the most conspicuous services in nearly all branches of learning were rendered by the Germans, instead of by the Italians and English as during the preceding century. In fact, Germany was then at the zenith of her glory, and supplied an impulse for all other nations.

The influence of philosophy and the natural sciences became also more and more marked. At the head of its philosophers must be placed Leibnitz (1646–1716), who by his own writings and those of his pupils created a philosophical school whose influence is still everywhere felt. His doctrine was dualistic: Matter is created once for all, and has no further need of the Creator. As concerns the spiritual world, he assumed minute, indivisible, intelligent beings, called monads—constituents of all bodies and all beings. In close relation with him stood Kant, while in England Locke and Hume became leaders of the opposed and materialistic school, declaring the brain to be an organ for the secretion of thought.

Among the universities founded during the eighteenth century were those of Breslau, 1702; Bonn, 1771; Stuttgart, 1781; Pesth, 1794; Göttingen, 1737; and Erlangen, 1743. Medicine was also cultivated in learned societies, which increased constantly in numbers. In 1744 Frederick the Great united two other societies into his Royal Academy. In Switzerland, in 1751, was founded an association of physicians and naturalists, while in France royal scientific societies were founded at Bordeaux, Montpellier, Lyons, and Dijon, and the Royal Medical Society of Paris lived from 1717 until 1788. In spite of all these opportunities for enlightenment, everything was not yet enlightened. Then De Haën defended the existence of demons, and Maerz, a well known theological teacher, in 1760 devoted a book to witches and magic. That witches were burned publicly, is a matter of

history, even in America. So late as 1821 there was a statute regarding witches in Ireland, and they were burned in Mexico as recently as 1877. But these are flying pictures of the eighteenth century, which are meant only for the moment to illustrate the more serious topic to which we must now address ourselves.

First of all, the *medical systems and theories of the century*. Many hundred years previously Galen had originated a method which deserves perhaps the title of pure eclecticism. The first purely eclectic system similar to his originated with Boerhaave (1668–1738), perhaps the most famous physician of his or any other century. He was the son of a clergyman near Leyden, Holland, and was one of thirteen children. Originally intended for the clerical profession, he had studied philosophy, history, logic, metaphysics, philology, mathematics, as well as theology, with great diligence. His education was later directed to the study of medicine because of the statement that the purity of certain theological doctrines was endangered by him. So he studied chemistry and botany, and then anatomy and medicine, graduating in 1693. He practiced in Leyden with great success, and was offered a court position. In 1709 he was tendered the chair of medicine and botany, and in 1714 that of the practice of medicine; in 1718 he was also made professor of chemistry. In all of these positions he displayed the greatest capacity. He was a clinical teacher of rare talent, and soon acquired such reputation as to attract to Leyden students from all parts of the world, in such numbers that no lecture-room in the University could contain them. He was the first to give separate lectures on the subject of ophthalmology, and employed the magnifying glass in examining the eye. As a practitioner he was no less popular, and he left an estate valued at two million dollars. He was so famous that when a Chinese official addressed a letter "To the Most Famous Physician in Europe," it reached him safely. He made no distinction in his patients, and compelled Peter the Great to wait a whole night for his turn to consult him. His most eminent pupils were Haller, Van Swieten, De Haën, Gaub, and Cullen.

Boerhaave's influence and dignity, which were astonishing even in a physician, were based no less upon his encyclopædic attainments than upon the benevolence and purity of his character. He was free from disputatiousness and vanity, although everywhere regarded as an oracle. His universal maxim was, "Simplicity is the seal of truth," although he never manifested this in his therapeutics. He employed the thermometer in the axilla in examining his cases, as did the iatrophysicists of the previous century.

His doctrines did not form a new system, but rather a composite of earlier systems. He stands also in the anomalous position of one who had the whole world at his feet, and yet contributed little or nothing which has been of essential importance. In fact, his peculiar views have been so universally given up that they are of only meagre historic interest. He looked upon disease as a condition in which bodily action or natural activities, being disturbed or unsettled, could take place only with difficulty; the reverse of this, of course, constituted good health. Fever he regarded as an effort of Nature to ward off death. Digestion was explained, like the circulation, upon mechanical principles. In his therapeutics, beside his efforts to sweeten the acid, to purify the stomach, to get rid of acridities, he made Hippocrates and Sydenham his models. His biographers say that his medicines were less effective than his personal appearance. He left many adherents, but no school of followers. It must be said, however, to his great credit, that while not the first to give clinical instruction, he permanently established a clinical method in teaching.

Gaub (1705–1780), professor in Leyden from 1731, was but little inferior to his master Boerhaave in fame as a teacher. He wrote the first complete work on the exclusive subject of general pathology. In general therapeutics he considered the healing power of Nature amply sufficient to remove sickness, but attributed this power sometimes to the soul and sometimes to the body.

There arose, naturally, strenuous opposition to the views and teachings of Boerhaave, and his principal opponent was Stahl (1660–1734), who was one of the most important systematists of any age, a profound thinker and a pioneer chemist. He began lecturing in Jena

at once upon his graduation, at the age of twenty-five, and moved through two or three different university positions until he came to Berlin at the age of fifty-six. He was a great pietist, of uncouth manners, faithful to his laboriously acquired convictions, and bitter and relentless against those who could not accept them. Indeed, he regarded his convictions as revelations from God. He looked upon the success of another as a personal injury to himself, and from being first a croaker he became finally a confirmed misanthrope, until he fell into actual melancholia. Pecuniary profit he never sought, and its pursuit he scorned. His views were dynamico-organic, pietistic, and antagonistic. He regarded the soul as the supreme principle, life-giving and life-preserving, not to be confounded with the spirit; when hindered or obstructed in its operation, disease was present. The soul governed the organism chiefly by way of the circulation; consequently plethora played an important rôle. To get rid of this plethora the soul employed either fever or convulsive movements; for example, in children plethora produces a pressure of blood to the head, and by way of compensation the soul provides a hæmorrhage from the nose. For reasons easily appreciated, he regarded bleeding piles as safety-valves of the utmost importance. Fever was a salutary effort of the soul to preserve the body; this was true even of intermittents, and accordingly he never gave cinchona. He scorned anatomy and physiology, saying, in one place, that medicine had profited as much by the knowledge of the bones in the ear as by a knowledge of snow which had fallen ten years previously. But Stahl was one of the most eminent chemists of the age, and did a great deal to liberate chemistry from the glamor of alchemy and the domination of pharmacy, and to transform it into an independent science.

Stahl's doctrine has been called Animism, and was a reaction against the chemical and mechanical theories of the seventeenth century. He gained a considerable number of followers, the most notable of them among the French being Sauvages (1706–1767), the forerunner of Pinel and an opponent of pure mechanics, who animated the mechanical system of the body with Stahl's "soul." This was, *par excellence*, the age of artificial systems, and so Sauvages in his classification supplied a system which had ten classes of diseases, each of which had several orders, and some as many as 295 genera and 2,400 species of disease!! Even Linnæus had 325 genera of disease, while Cullen had only four classes with 149 genera.

The Mechanico-dynamic system was a sort of compromise or mixed system, which was held in high honor by the most eminent physicians and better minds of the last century, and has even been prized by Sprengel as the best of all. It was originated by Friedrich Hoffmann (1660–1742). Hoffmann's father was a physician, and he was himself born in Halle, whose university he attended. He acquired lasting reputation as an oculist, and was made professor of anatomy, surgery, medicine, physics and chemistry at his *alma mater*. Our commonplace "Hoffmann's anodyne" is named after him. He was one of the most erudite professors of his day, more easily understood than Stahl, widely known for his fluent diction and amiable temper, and accordingly won great renown for his university. His good fortune as a practitioner was so great that even Boerhaave declared him his own equal. As a writer he was voluminous, one edition of his works comprising twenty-seven large volumes.

According to Hoffmann's views, life was simply mechanical movement, especially of the heart; death the cessation of heart action, putrefaction thereupon resulting. Health meant regularity of movements; disease, a disturbance of the same. He used the word "tonus" extensively. Ether he regarded as an important factor, producing and maintaining movements of the body, itself extremely volatile, corresponding largely to the "pneuma" of the ancients—it was, in fact, a motor principle and at the same time the perceptive soul. Ether was stored in the medulla, and circulated in a double way in the body; spasm was the consequence of too strong, atony of too feeble, influx of ether. Fever was a general spasm of the arteries and veins, having its cause in the spinal cord. Hoffmann's therapeutics were simple, and poor in drugs. These latter were intended to weaken, alter, or evacuate, and he was especially partial to the use of vinous remedies. The strong and toxic drugs he used but little.

William Cullen (1712–1790), an Englishman, rose from the deepest poverty to the greatest celebrity. First a barber, he afterwards became an apothecary, then a ship-surgeon, then a village practitioner, finally entering into partnership with William Hunter as a general practitioner. Both of these eminent men being in equally poor circumstances, they agreed to live in the same place, and that while one was studying the other should take care of the practice. In this way Cullen was enabled to graduate in 1740. Six years later he taught chemistry in Glasgow, and in ten years more came to Edinburgh as professor of medicine. He continued very active and famous up to the time of his death, but died as he had been born, in poverty. Among his numerous other charitable deeds he supported the widow of Robert Burns and published the latter's poems.

Cullen was the father of modern Solidism, a system based upon the solid parts of the body, the nerves being the chief agents. The life-giving element was, in his view, an undefined dynamic something (different from Hoffmann's ether or Stahl's soul) which he called *nerve force* or *nerve principle*, *animal force*, and *brain energy*, and in it he included the spinal cord. His nerve principle was supposed to produce spasms and atony, either actively or passively. The causes of disease, while of a debilitating character, were supposed to awaken reaction of the healing powers of Nature; fever was a reparative effort of Nature, even in its cold stage, the blood playing no part in it. He constructed a very arbitrary classification of fevers, as, in fact, he did of all diseases, his system of nosology being the secret of his reputation. His explanation of gout was famous: that disorder, he said, depended upon an atony in the digestive organs against which was periodically set up a reparative effort in form of a joint inflammation. In scrofula he had to assume, in contradiction to his nervous pathology, a peculiar acridity, and in putrid fever a putridity of the humors of the body. His therapeutics were simple and salutary, because of his renunciation of venesection, which was much abused in his day.

The most celebrated pupils and successors of Hoffmann were Gregory of Edinburgh, Gardiner, and in Germany the famous Thaer (1752–1828), who finally abandoned the practice of medicine because it promised more than it could perform, and who became a "father of husbandry."

A composite of the doctrine of Hippocrates, Sydenham and Boerhaave was represented in the so-called Old Vienna School, whose connection with the lives of Maria Theresa and Joseph II. deserves at least mention. Its founder was Baron Van Swieten (1700–1772), of Leyden, a descendant of a noble Jansenist family of the Netherlands, who graduated under Boerhaave after having studied at Louvain. After the death of his patron he was called to the assistance of the Archduchess, Maria Anna of Austria, who was suffering from an abortion, and gave such satisfaction that she recommended him to her sister Maria Theresa, who up to this time had remained sterile. To her and to her husband he gave advice which resulted in sixteen successive pregnancies, and then, as the result of his success, came to Vienna in 1745 as president of the General Medical Department of Austria. He was also made censor, in which position he incurred the enmity especially of the Jesuits and of Voltaire, whom he robbed of their influence. He was made baron, and became, next to Kaunitz, the most influential counselor of the Empress. His chief care was dedicated to the elevation of medical affairs in Austria, and especially to the improvement of the medical faculty. He had just seen success crown his efforts when he died of senile gangrene, with the reputation of being a great physician and benefactor of the poor. One of the greatest of his services was improving the treatment of syphilis, in which he, after the example of Paracelsus, recommended the internal use of corrosive sublimate.

More eminent as a physician than for personal character was De Haën (1704–1776), of The Hague, a pupil of Boerhaave. At the suggestion of Van Swieten, he was called in 1754 to Vienna as president of the clinic of the city hospital, which at that time afforded accommodation for only twelve patients. He was the real founder of the so-called Old Vienna School, whose merit, in contrast to the so-called new school, is to be sought in practical and diagnostic services

As De Haën quarreled with every one, he also did with Stoerck (1749–1803), the successor of Van Swieten in the direction of the Austrian Medical Department, and with Stoll (1742–1787), a clinical teacher who was especially famous as an epidemiologist.

Stoll lectured with great popularity until 1784, upon the completion of the Allgemeines Krankenhaus, when he fell into the background and was badly treated. He was the subject of numerous intrigues by his enemies, and had a wife who embittered his life, and who even had him buried in the dress of a Jesuit in order to injure his reputation after his death. To his credit be it said that, changing his views of the constituents of disease, later in life, and his original therapeutics becoming no longer of use to him, he abandoned them entirely. Nevertheless his therapeutic system flourished for a long time after him.

There were in vogue during this period numerous other doctrines, some of which were too puerile or insubstantial to gain any foothold at all; others exerted a certain amount of influence during the lifetime of their originators or for a generation afterward. With many of these I do not care in any way to deal. A few others, I think, ought to be at least mentioned in such a history as I am endeavoring to give you.

There was another Hoffmann—Christopher Ludwig Hoffmann (1721–1807),of Westphalia, who devised a so-called humoral theory in which the "acridities" of Boerhaave were mingled with the "putridities" of the pneumanists and the "irritability" of Glisson. His treatment and remedies for diseases were supposed to be antiseptic, as was very proper when dealing with putridities.

The theory known as the "Doctrine of Infarctus" had its origin with Kampf, who died in 1753. By infarctus, Kampf understood impacted fæces, which he thought originated in the humors of the body, portal vessels, and intestines; he recognized two kinds, the black bilious and the mucous. From this theory a widespread clyster fashion developed, and lords and ladies vied with each other in belaboring their infarcti and in administering enemas. As Baas says: "We cannot deny to the author of this doctrine at least an extensive knowledge of human nature. He supplied a universal remedial procedure, and gratified the apothecaries with the bulkiness of the herbs required for its practice."

Quite antagonistic to the views of the Vienna School were those of the School of Montpellier, inaugurated by Bordeu (1732–1796) and generally known as Vitalism. Bordeu died in the enjoyment of great reputation, but at variance with all his colleagues. He maintained the existence of a general life of the body, a composite life, resulting from the harmonious working of the individual lives and powers of all the organs, which were supposed to be associated with each other but each for its own definite function; the most important organs—the stomach, heart, and brain—being called "the tripod of life." In pathology he laid great weight upon crises, which were supposed to proceed from the glands.

The most important representative of vitalism was Barthez (1734–1806), of Montpellier, a man of great gifts and eager for knowledge. He recognized a vital principle as the cause of the phenomena of life, but acknowledged that its nature was unknown, although he endowed it with motion and sensibility different from a thinking mind. Plants were supposed to possess it likewise. Disease, he believed, was the result of an affection of this vital principle. Every disease was divisible into certain disease-elements, viewed as parts of the whole, and these were again divisible into secondary elements. He explained putrid fevers as specific vital diseases—in which view, of course, he embodied humoral ideas.

In Germany at about this time a similar doctrine obtained—a doctrine of vital forces which the versatile Reil (1759–1813) elaborated into a system.

Meantime in England a doctrine was elaborated by Erasmus Darwin (1731–1802), which partook in a certain degree of the doctrines of Stahl, Hoffmann, Haller, Brown, and Bordeu. Erasmus Darwin distinguished himself not only as a physician, but as a poet, philosopher, and physiologist. He was a friend of James Watt. Of his life it is said that by his practice and very fortunate marriages he became wealthy, ate much, and drank nothing but water. His chief work, entitled

"*Zoönomia*," or the Laws of Organic Life, was published in 1784, and is well worthy of perusal to-day. He recognized two fundamental substances, spirit and matter. But it is not so much for his doctrine as for his researches into animal and plant physiology, and reflexly because of his more celebrated descendant of the same name, that we owe him most gratitude.

(*To be continued.*)

THE SCHEMING MICROBE.

A microbe sat on a maiden's lip, right on its kissiest part,
And murmured, "I'll work that young man off, in the highest style of art;
I'll send a raging colony careering through his veins,
And they shall soak his system with a choice lot of ptomaines.

"O, I'm of the choleraic sort and the epidemic brand,
And you may bet the victim knows whenever I'm on hand;
For I raise a rumpus in his guts, like a slowly burstiug bomb,
Which only ends, as a general thing, when he reaches kingdom come."

Now, he that the grizzly microbe had in its measly, pizen mind,
Was a nicish, youthish laddie of the hottest-blooded kind;
Who loved this sweetish, youngish girl with an incandescent vim,
Which only found an offset in the way that she loved him.

Well, on the next sweet Sunday night, this nicish, youngish man
Was seated on the same chair with his darling Mary Ann;
And he hugged till he nearly busted her precious diaphragm,
And kissed her sixteen hundred times, with the zest of a battering ram.

The microbe had been swapped at least one thousand times, and when
The young man left, the ornery beast was still with Mary Ann;
When her beau was gone, she finished up by kissing "Puggy Wee,"
And next day that devoted pup 'most died of diarrhæe.

—W. C. Cooper, in *Medical Gleaner*.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the Medical Age, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., APRIL 10th, 1895.

Editorial.

FOREIGN BODY IN BRAIN.

At the last meeting of the Medical Society of the State of North Carolina, Doctor Charles G. O'Hagen, of Greenville, exhibited a piece of iron two and a half inches long, weighing about four hundred grains, from the breech of an old gun, with the following history:

About five years ago a colored man with a desire of making more noise than any one else, filled a rifle full of powder and exploded it. After the resultant excitement subsided, a wound was found in the bridge of his nose, doing some injury to the frontal bones. The man remained in this unsatisfactory condition for about four years. In February, 1894, he was seen by Doctor O'Hagen, who probed for the cause of the wound and found a hard substance. With a pair of forceps this piece of iron was drawn out, after some vigorous pulling. During all the period the iron had been buried in the head of the negro he had been intellectually and physically as strong as before, indeed had experienced little or no inconvenience except some discharge at the point of injury.

Doctor O'Hagen thinks the piece of iron must have remained between the hemispheres of the brain during these four years. After its removal the wound healed with little trouble.

This calls to mind a somewhat parallel case which appears under the title of "Brain Wounds" in the *Therapeutic Gazette* of May, 1889, page 329, wherein the breech-pin of an old "Tower musket" was removed from the brain of a young man twenty years of age. The explosion of the gun had driven this

portion thereof into the forehead, slightly to the left of the median line, and the rear point of the breech-pin had hooked behind the *sella turcica*. The screw which held the breech portion of the pin to the stock was jammed against the superior portion of the cranial vault. This solid mass of iron was nearly five ounces in weight, two and three-fourths inches long, five-eighths of an inch broad, and perhaps one-fourth of an inch thick along its posterior and flattened portion (the cylindrical portion was five-eighths of an inch in diameter and nine-sixteenths long). The testimony of the most conservative witnesses was that not less than six or eight heaping teaspoonfuls of brain matter had been lost, and with the extraction of the breech-pin it was found necessary to remove nearly a teacupful of disintegrated brain substance—in all six or eight ounces by measure must have been taken away. Though this wound penetrated the left lobe of the brain four and a half inches, actual measurement, the patient recovered, and, after a somewhat checkered career extending over twenty years, eventually died of delirium tremens. Several other unique cases of brain wound are cited in this article.

GHOSTS.

So distinguished an authority as Mr. John Fiske—whose philosophic and historical writings have raised the American standard of criticism to a level with that of England, if not indeed above it—ascribes the idea of ghosts to the indisputable fact of dreams. The uncritical savage cannot realize the generic distinction between the testimony of the awakened and united senses on the one hand, and the report which the soul brings back from its midnight "excursions" on the other; the persons who appear and speak to him in his sleep have not, he knows, been bodily present in his tent; either the sleeper's soul, or ghost, must have gone forth and met with the souls, or ghosts, of others, or the latter must have found entrance to the sleeping-apartment in spirit form and there held converse with the spirit of the sleeper. And inasmuch as the dreams do not confine themselves to *tête-a-têtes* with the living, but call up the images of those who have crossed the Styx, the very natural conclusion is that the souls (or ghosts) of the latter have survived the ordeal of death and are able to reappear to the living, not only in sleep but whenever the "conditions" of waking life are auspicious.

We cannot be absolutely certain that the savage's theory is incorrect. But we venture to think that it is safer to trust the impressions made upon the waking mind, and to employ these as a criterion of the validity of other impressions, than it is to elevate the vagaries of sleep to the dignity of evidence equal in rank to that of the alert senses. But because it is true that a certain degree of restfulness—candor, receptivity—is necessary in order to receive the truth when one is awake, and because, too, of the unfortunate rarity of this mental attitude, sleep sometimes affords occasion for corrective impressions; hence sleep itself is simulated in the reveries of poetry and worship, as a condition peculiarly suitable to the reception of those generalizations that escape the busy and disorderly brain of the man of the world. This repose of the waking mind is in every way superior to the repose of sleep; there is often more disorder and confusion in dreams than there is in the market-place, for the under strata of character go with us there, while the critical faculty is drugged.

Dreams are mostly reminiscences. The multitudinous impressions stored away in the brain are ransacked at night; and so marvellous is the power of creative mind that these fragments of waking experience are arranged in a consistent panorama, different in its movement from anything that ever actually occurred in connection with the *dramatis personæ* of the dream. The sub-consciousness of man is aware of some things which the clearer light of consciousness itself obscures, just as the stars are obscured by the sun; but its chief function in sleep seems to be to masquerade in the cast-off clothes—the forgotten impressions—of the waking mind. It must also be admitted that mere description is capable of making a picture for the memory to subsequently resuscitate; even the musing of the poet, as Shakspeare has proved to us, may summon the dry bones and clothe them in the beauty of a Desdemona or the villainy of an Iago. The same faculty which

weaves together the isolated suggestions of observation or narrative, and makes of them the image of a man, is at work in sleep; its materials have been supplied; it is making use of them. So far as we know, there is no objective reality in one case more than in the other; but the corrective senses being off guard in sleep, the picture leaps into a vividness which in the absence of sleep it could not assume, except perhaps in the case of a few mystics like Swedenborg or Boehme, or under the peculiar circumstances which usually accompany the seeing of "ghosts."

The ghost-seers always trust their eyes; but in sleep the eyes receive no external impressions, yet the sleeper *sees*. Is it not reasonable to suppose that a certain *aura*—a hypnotic effect—caused perhaps by the weird associations of death and of ghastly crime—may pass over the senses and leave the subject for the moment only mechanically awake, so that the germs of uncanny suggestion, from whatever source derived, burst into flower, and lo! he sees a ghost?

So hard-headed and practical a man as the late lamented Doctor Worthington, of Sherbrooke, Quebec, has given his testimony, as the readers of THE MEDICAL AGE are aware, to the apparent existence of ghosts. He did not undertake to explain the phenomenon, but his account proves that the local atmosphere was saturated with grim associations, in the midst of which the "ghosts" were in the habit of appearing. People of a cheerful and hearty disposition—and Doctor Worthington was one of them—do not see ghosts under cheerful and ordinary conditions. There is always a suggestion of "mental pathology," so to speak, about the appearances. Crime, and death, and religious exaltation, creating a certain mental alienation from common affairs and the work and play of life, are significantly associated with the apparitions from the "fields of asphodel."

If these foreigners really have a visible personality, they are inexplicably fastidious in their selection of time and place for "coming out." If, on the other hand, we must look to the mental (and relatively to the nervous) condition of the ghost-seer for an explanation of the phenomenon, we find it in the temporary suspension of the critical faculty—that coöperation of the senses under control of the reason which protects us ordinarily from delusions and frauds. Such a suspension of the reason is, perhaps, not proven; but who among us has failed to observe the fact that fascinating tales and astonishing situations invariably withdraw the attention from its ordinary channels, and expose the observer to more or less serious error in reference to events that are taking place before his eyes? This is one of the secrets of the success of prestidigitators and spiritist "materializers." In any unnatural attitude of the nervous system, as of the body, a partial paralysis or somnolence supervenes, in some respects equivalent to the suspension of faculty which occurs during sleep; and the result may be (who knows?) that visions and apparitions corresponding to the suggestions of the environment or to the prepossessions of the individual leap into the foreground, as dreams do in sleep. A moment later, when the nerves have successfully struggled to arouse themselves, the vision disappears.

CHANGE OF BASE.

Under this caption the *Times and Register* gives utterance to the following:

Well! antiseptics are as dead as Cæsar's wife. This wonderfully seductive germ theory is being slowly but surely undermined by our latest investigators. The ubiquitous microbes, like the poor, we are now told, are always with us and in us, and all quite harmless except for what is supposed to be their toxic products or secretions.

Antiseptics, so-called, have been proven to be quite inert on living tissues except when employed of such strength as to simultaneously devitalize living protoplasm, produce a superficial tissue-necrosis or severe irritation. They have gone; and here we have asepsis, another name for cleanliness.

The latest offspring of scientific therapeutics is antitoxin. . . . . It may be as well, however, before we give the stamp of approval to a remedy, to have a clear idea of the disease. There are certainly good grounds for disputing the claim that Loeffler's germ is an essential ætiological factor in diphtheria, as we understand it chemically, for in some of the most virulent and mortal cases it cannot be found, while on the contrary in many of the mildest forms of pharyngitis multitudes of the bacilli abound. . . . .

Experimental research has vastly aided in explaining many obscure questions in the science of medicine; but to expect it to displace the necessity

of patient and exact clinical observations at the bedside, or to wholly eradicate empiricism in medicine, it is scarcely necessary to assert, is more than we hope to realize.

It must be remembered, in spite of the brilliant claims which have surrounded the germ theory, that the so-called cholera bacillus could not be demonstrated in the water poisoning the inhabitants of Hamburg and Altona; neither could the so-called typhoid bacillus be discovered in the water supply which last year induced the epidemic in Worthing.

The belief that infectious diseases are due to a poison and not a germ, gathers added weight when we reflect that no germ which could possibly stand in relation of cause has ever been demonstrated in that most infectious of all diseases, viz., variola; yet we do know that the contents of a vesicle or pustule inoculated into the most healthy of individuals will surely induce a typical though perhaps mild clinical picture of the malady. Then, too, the germ theory is indebted more to Pasteur than to any other one person—a man devoid of pathological information, who is in no sense a medical man, and the chief of whose exploitations is in the domain of hydrophobia, the rarest of all diseases (if indeed it is a disease *per se*)—one that possesses no pathology, and upon post-mortem discloses no lesion except meningeal congestion, which is common also to a multitude of other maladies. Pasteur's anti-rabic doctrine has been made the pedestal upon which the germ theory rests, and yet no one has pretended to have discovered the microbe of rabies.

EDITORIAL NOTES.

Materia Medica and Common Sense.—

Recently the *Medical Record* commented most pertinently upon the fact that "we have too many drugs, too many preparations of drugs, and too much teaching of materia medica." This is an evil which is continually increasing, with the result that: "The druggist is year by year constantly obliged to encumber himself more and more with useless and expensive material; the student is obliged to load his already burdened memory with a mass of useless clinical or pharmaceutical facts; and, finally, the practitioner is thereby so embarrassed that he speedily forgets a large part of his materia medica and settles down to the use of routine remedies that are suggested by chance instead of being the result of ripe experience and good judgment."

The remedy is in the hands of teachers and those who revise our pharmacopœias. Matters have arrived at such a stage that it is now desirable that each drug be carefully considered and all unnecessary preparations thereof dropped.

Caution.—

Cases of glanders attributed to the use of impure equine serum are already noted. A recent writer states, moreover, that "although strenuously denied, it is now well ascertained that several of the horses from which antitoxin was obtained by Aronson were suffering from glanders."

Whether the above assertions are true or false, it certainly would be well for the medical profession at large to refresh themselves concerning the treatment of this usually fatal veterinary disease; also to scrutinize the product employed.

A Handsome Fee.—

According to the *Indian Medical Record*, an English army surgeon received a quarter of a million dollars for occasional attendance during three months on the Nawab of Rampur, during an ordinary attack of rheumatism.

Young and ambitious American practitioners will find no occasion to emigrate to India, in spite of the foregoing; the land of the Hindu, Parsee, *et al.*, is well supplied with medical men, both foreign and native.

Why?—

A puzzle for pathologists is the fact that during the visitations of cholera to Paris the epidemic has always been most fatal to persons living above the second story.

Justice at Last!—

The courts of New York State have decided that newspapers have no right to publish the portrait of an individual without the full consent of the latter.

Items and News.

Morphinomania.—

In *L'Union Médicale*, Jules Rochard draws a gloomy picture of the increase of the morphine habit in France and elsewhere—a habit, he declares, "that becomes incurable at the end of six months' indulgence." The fair sex and doctors are, in his opinion, "the most deeply addicted." Women delight in declaring how they indulge in this vice, and exhibit ornamental hypodermatic syringes to their friends. The bulk of the male morphine *habitués* are medical men, and they take the greatest pains to hide the vice. Doctors and persons associated with them form nearly half the total of men addicted to the habit.—*Medical Record.*

Another Pasteur Victim.—

Two months ago a young officer named Stevenson, while serving with his regiment in India, was bitten by a dog which he stooped to stroke—the animal's teeth just penetrating the skin of one finger. The bite seemed to be trivial, but Mr. Stevenson hurried to Paris and placed himself under M. Pasteur's care, and about a fortnight ago returned home to Birkenhead, apparently none the worse and seemingly in robust health. Last Monday week Mr. Stevenson became ill, and a peculiar form of partial paralysis set in, the throat alone being affected, and he died on the following Wednesday.—*Medical Times* (London).

A Hint to New Graduates.—

New York affords better openings for the new members of the medical profession than does Texas. A gentleman who has traveled extensively in the latter State in quest of a location declares that not only is every hamlet and cross-roads supplied, but as a rule such are overstocked with medical men. "Many are standing about town awaiting emergency cases, with the expectation of realizing therefrom sufficient 'filthy lucre' to insure transportation to their native heaths."

The same is practically true of Dakota, Nebraska, Kansas, and other Western States.

Great Presence of Mind.—

The disposition to seize every opportunity to dose the children was beautifully illustrated by a physician's experience not long ago. He was hastily called to see a youngster of three years, who had fallen out of a window about four feet to the brick pavement below, landing on his head. When he reached the scene, the mother, with pardonable pride in her presence of mind and domestic resources, exclaimed: "Oh, doctor, I knew that something ought to be done at once, so I gave him two teaspoonfuls of castor oil."—*Medical Times.*

Epitaph.—

In a late Georgia newspaper appeared the following:

I gave him his medicine regular,
From morn to the set of sun.
He took two powders at ten o'clock,
And another powder at one.

But doctors cannot help us,
When death knocks at the door.
Goodby, my darling husband!
You left at ten minutes to four!

—*Atlanta Medical and Surgical Journal.*

Just So!—

Between theatrical bill-board posters and anatomical cigarette cards, the literature on lost manhood so generally distributed by the "retired missionary from India," and the diurnal pelvic patent-medicine advertisement, the young person of the present day probably knows much more about himself and others than his greatgrandfather did when he came to give up the ghost.—Doctor Sangree, in *Times and Register.*

Bacilliphobia.—

Doctor F. P. Mann advises the wearing of a "thin pledget of cotton" in the nose to keep out the bacilli. Better close the anterior nasal fossæ by sutures; but then how about the mouth? Must this orifice, too, be closed against the intrusion of bacilli? It looks very much like a case of "bacilliphobia." By the way, "bacilliphobia" is no longer a rare disease.—*Brief.*

Leprosy in Russia.—

Over six hundred new cases of this disease are annually registered in the dominions of the Tzar. Indeed, such is the increase that it is now proposed to form a leper colony in the vicinity of Nicolavitch. The enclosure will comprise land for tillage, the necessary buildings for habitation, hospital, etc., the whole to be surrounded by a stockade.

A Text for Thought.—

We are not given to pessimism, but certainly the tendency to overlook the quackish advertisement of the physician otherwise in good standing seems to be noticeable among practitioners who should use their active influence to combat this spirit of disorder.—*Southern Journal of Homœopathy.*

Gelatin Capsules.—

There are few conditions of the economy, either in health or disease, when gelatin capsules are not available as a means of elegant and palatable medication. Even when the stomach is lacking in secretion, a swallow of water or a draught of hot tea will insure their speedy disintegration.

Diphtheria.—

In general practice this malady is not incurable or unmanageable; it is only in the laryngeal forms that it becomes especially dangerous. Consequently with modern methods of practice the mortality is not as great as in scarlet fever or whooping cough.—*Medical Times.*

The Smallest Man.—

This title accrued to Dudley Foster, a dwarf who recently died at Bridgetown, Nova Scotia, at the age of sixteen years and ten months, from cardiac trouble. He weighed but twenty pounds and attained a height of barely thirty inches.

Rocking-chair Pathology.—

An English surgeon has discovered that those who use these comfortable articles of furniture "get deaf the soonest;" also that "rocking hurts the eyes and makes people near-sighted." R—ts!

Hepatitis.—

This is a most common malady in Russia, especially among the lower classes, and is generally attributed to the excessive consumption of vodka.

Is This True?—

It is said that leeches are proof against hydrocyanic acid; also that they may be fed upon cantharides without being the least inconvenienced.

Dysentery.—

This is a most fatal malady on the Guinea Coast of Africa, where almost one-half the deaths are attributable to it alone.

A Trite Aphorism.—

The doctor who knows nothing outside of medicine does not even know that.—*New York Medical Times.*

What Next!—

A homœopathic writer claims that the third decimal trituration of succinic acid will cure hay fever.

Book Reviews.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

The April number contains installments of the two serials: "A Singular Life," by Mrs. Elizabeth Stuart Phelps Ward, and "The Seats of the Mighty," by Gilbert Parker. Fiction is further represented by the second part of "Gridou's Pity," by Grace Howard Peirce. A touching single-number story by Annie Trumbull Slosson is entitled "Dumb Foxglove." George Birkbeck Hill contributes the first of his papers, "A Talk Over Autographs." An atmosphere of spring is given to the issue by a delightful paper on "Flower Lore of New England Children," by Alice Morse Earle. Two papers of educational interest are "The Expressive Power of English Sounds," by Professor Albert H. Tolman, and "The Basis of Our Educational System," by James Jay Greenough. Poems and the usual departments complete the number.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The fiction of the April number is one of its strongest features. Installments of serials by the leading novelists of England and America, George Meredith and William D. Howells, are of themselves a literary feast. In addition there are two short stories: "A Question of Art," by Robert W. Herrick, a young writer of unusual force and originality, and "La Belle Hélène," by Miss Goodloe, the second of the very bright stories of Girls' College Life which she is contributing to this magazine.

THE DELINEATOR. Price, 15 cents; $1.00 per year. The Butterick Publishing Co. (Limited), New York.

The April *Delineator* presents a number of novelties. The paper on "Bicycling," with illustrations of costumes, will interest all lovers of the wheel. Mrs. R. A. Pryor writes on the "Etiquette of First Calls and Introductions." The Dean of Barnard College contributes "A Girl's Life and Work at the University of Chicago." Belle Springer writes of "Typesetting as an Employment for Women." "A Novel Salmagundi Party" suggests a delightful evening's amusement.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Company, New York.

The April number appears with a handsome Easter cover, and contains as leading

articles: "The Metropolitan Opera Season of 1895," by Robert Hughes; "Mysteries of Africa," by F. W. Wendt; "Artists in Their Studios," by W. A. Cooper; a clever story by Edgar Fawcett; a story of "The Man in the Iron Mask," by Francis Aymar Matthews. There are also short stories, poems, illustrated articles, book reviews, etc.

HOME AND COUNTRY. Price, 15 cents; $1.50 per year. Joseph W. Kay, New York.

The number for April contains: "An Easter of Ye Olden Time, and Easter Hymns," by T. P. Hughes; "Our Jennie," by R. E. Francillon; "Life Among the Afghans," by Bertram Bernard; "The Doctor's Story," by Roger MacDonald; "Venetian Glass," by Florian Martell; "The New Birth of India," by J. B. Whitford; the usual poetry, reviews, etc.

THE SURGEON'S STORIES. By Professor Z. Topelius. Six volumes; cloth; 12mo. Price, 75 cents each, $4.50 per set. A. C. McClurg & Co., Chicago.

These are a series of stories giving vivid pictures of both Finnish and Swedish history, and in this respect rank with the works of Walter Scott and Louise Mühlbach. The first volume treats of the time of Gustavus Adolphus and the Thirty Years' War, the thrilling episodes of which commend it to all lovers of romance, while its historical truthfulness and charming style make it attractive to literary readers of all classes.

"Times of Battle and Resting" gives a stirring and graphic account of the conquest of Poland and Denmark by Charles X., and the more peaceful and important reign of Charles XI. The title of the third volume, "The Times of Charles XII.," is sufficiently comprehensive. "The Times of Frederick I." merely supplements the preceding. "Times of Linnæus" and Times of Alchemy" are natural sequences to the other works.

These volumes, which, as before mentioned, are historically correct, deal with the history of two well known Finnish families—one a line of wealthy, autocratic peasants; the other a family of nobles who are really the illegitimate offshoot of the former. And all through these six volumes runs the interesting tradition of the "copper ring" which today is very widely believed throughout portions of Finland and Sweden.

Finnish life and customs prior to the Russian conquest are delineated in detail. Sketches are given, moreover, of the Swedish court, and of the greatest of the Swedish and Finnish statesmen.

The volumes as a whole should be in the library of every family, particularly where there are children, since in no other way is it possible to obtain in such condensed and interesting form matters of history that should be known by all.

ON INDIA'S FRONTIER. By Henry Ballantine, M.A. Cloth; 16mo; pp. 192. J. Selwin Tait & Sons, New York.

This most interesting work deals with the little known region of the Himalaya Plateau five hundred miles north of Calcutta, bordered by Hindustan, Cashmir, and Thibet, and known as Nepal, or Gurkhas' Land. This semi-independent province is ruled by its own maharajah under the tutelage of an official English resident, and contains a mixed population of Gurkhas, Newars, Magars, Gurungs, Bhuteas, Limbus, Keratis, Lepchas, and Cashmir, Kabul and Persian Mohammedans.

The narrative is especially interesting because of the number of illustrations taken from photographs; otherwise the text would be comparatively mediocre, as it partakes rather of the scope of a magazine article than that of a bound volume of travel. We could wish Mr. Ballantine had elaborated more and entered further into the history of this petty State, instead of devoting space to speculation upon sanitation and drainage and the political features of the region. We naturally imagine that his opportunities were very great—that, in fact, he saw so much that it was with difficulty he brought it into the compass desired, and felt it impossible to do the subject entire justice. Nevertheless the volume is a valuable contribution to the history of a region that is little known or understood, and that does not even appear on the majority of maps. Precise information regarding the fauna, archæology, sport, etc., of the Nepal Himalayas, yet remains to be given to the world.

THE PRACTICE OF MEDICINE. Volume I. By William C. Goodno, M.D., and Clarence Bartlett, M.D. Cloth; large 8vo; pp. 962. Price, $6.00. The Hahnemann Press, Philadelphia.

This work, from a clinical standpoint, is of no little value. The author, though a homœopathist, gives clinical data with a clearness and conciseness equaled by few medical writers. The opening volume deals in the most thorough and complete manner with the specific infectious diseases and the neuroses, and is a credit alike to author and publisher. It is emphatically based on the work of *physicians* and not upon sectarianism, and for students, whether undergraduate or post-graduate, is almost invaluable.

Therapeutic Brevities.

Liquor Sedans.—This was originally gotten up for cases of pelvic disease, but its employment in the dreadful combination of tubercle and uterine disease is indicated and will be of value. Cases of neurasthenia in men suffering much from pain caused by profuse protoplastic colloid discharges in urine are helped thereby. It is a good anodyne in cancerous cases. I also believe that much of the surgery done to-day for aching, suffering women would be prevented if medical men would use this standard preparation. A woman with pelvic abscess needs surgery through the abdominal walls or vagina or rectum; but because an ovary is sore and somewhat degenerated in structure, or the womb is enlarged, the knife should not be always employed. One case that particularly arrests my attention now is of a young woman who had borne three children: extensive laceration of the perineum; womb enlarged, sensitive to touch with finger, and especially to internal exploration; subject to spells of unconsciousness and rigidity of body; pain in back, pelvis, and head; dysmenorrhœa; very sensitive to medicine of any nature; was able to take Liquor Sedans in small doses; became pregnant, and bore healthy child at full term, November, 1894, six years after the birth of the previous one. A child was desired in this family, as the oldest boy and the only daughter had died in 1891 of diphtheria.—Doctor John A. Cutter, in *Medical Bulletin.*

Stone Broth.—The old recipe for stone broth has gone out of fashion, but the principle involved in it is at the root of many inventions of modern times. We were told to boil a smooth pebble from the brook, adding a little salt and pepper, an onion, divers vegetables as a relish, while the flavor was improved by the addition of a mutton bone. No doubt the broth was good, and equally no doubt the modern suggestion that ladies and gentlemen suffering from insomnia should go "hopping" in Kent is good also, notwithstanding the feeble hypnotic influence of the hop. The well-to-do hop-pickers give their labor for nothing, and the farmer in return provides them with bed and board of a simple character. It is quite idyllic, and if one considers the causes of nine-tenths of the insomnia from which people suffer nowadays, "hopping" ought to be a cure. The fresh air, the long hours of not too laborious work, the simple diet, the absence of responsibility, and the probably hard bed, give as complete a change as possible from the habits of mental worry and bodily indulgence so often at the root of the malady. We have the greatest possible respect for the therapeutic virtues of the hop, but when prescribed in this form we are reminded of the pebble in the stone broth, and attribute the excellence of the prescription to its other ingredients.—*British Medical Journal.*

Lactophenin.—I have tried this new remedy as an analgesic in over eight hundred cases. In over one hundred cases of pneumonia I have had occasion to notice its effects, and the fact that it is a safe and speedy antipyretic. I cannot say too much of its soothing effects on the nervous system and of its general superiority above all other synthetic analgesics.

Recently I had occasion to prescribe it for a case of occipital neuralgia after all other remedies had failed, and the relief that was afforded was both speedy and permanent. I sometimes find it advantageous to combine it with caffeine.

One notable fact about Lactophenin is, that in no instance has it ever appeared to induce that blue, livid condition of the lips and face that so frequently succeeds upon the administration of acetanilid, antipyrin, phenacetin, etc.

In inflammatory rheumatism and in *la grippe*, in conjunction with quinine and salicylate of soda it is my sheet-anchor; in the former malady it is advantageously alternated with syrup of trifolium compound.—Doctor J. C. Dwyer, Valentine, Nebraska.

Phytolacca.—This drug is an antiseptic germicide especially available in diphtheritic or scarlatinal sore throat when applied locally with swab or brush; it is also equally efficacious in the former malady administered internally. In all forms of tonsillitis and sore mouth it is an excellent remedy; likewise valuable as a dressing to indolent ulcers and foul-smelling sores. It is also very efficacious in chronic rheumatism. It is *the* remedy in parotitis, and likewise in metastatic orchitis. I apply externally on wounds caused by rusty nails or bites inflicted by snakes or dogs, and have found it universally successful. It is most efficacious for sore breasts and sore nipples, applied dry or in the form of an ointment. In fact it is the ideal germ-destroyer, and once employed its use will never be given up. It has been lauded as an anti-fat, but so far as this is concerned it is probably as valuable as any anti-fat remedy. Wherever there is pallid mucous mem-

brane, with a sense of irritation and burning, exudation patches, mammary fullness with pains, it is a remedy that will very seldom disappoint.—*Chicago Medical Times.*

Tubercular Peritonitis.—M. H. Folet, of Lille, suggests that perhaps the air coming in contact with the peritoneal surface of the intestines has something to do with the beneficial results of operation on cases of tuberculous peritonitis. In one case, after evacuating six liters of serous fluid, he simply injected into the peritoneum three liters of air. The fluid did not reaccumulate, and patient has remained well for the past eight months.—*American Practitioner and News.*

This is precisely the plan adopted by Doctor Stone, in the Bellevue or New York Hospital, nearly forty years ago, and for which he was so ridiculed by the profession that he discontinued it. Many of the so-called great discoveries of the day are simply old ideas unearthed from the sepulchre, where they were gently laid to rest years ago, and proclaimed to the world as the bright ideas of modern scientists, and successful, perhaps, because they are along the track of modern progress.—*Medical Times* (New York)..

Epistaxis.—Doctor Baumgarten recommends thorough examination of the inside of the nose in order to discover the source of bleeding, which will usually be found at the anterior part of the septum in the form of one or more small superficial vessels of red color, or else little nodules, erosions, varicose veins, or a small empty vessel looking blackish on a red background. Occasionally the point of hæmorrhage is covered with red blood crusts which must be softened and carefully raised in order to expose the seat of morbidity. If there is nothing of a suspicious nature to be seen, the patient must be made to blow his nose several times.

Another method is to apply a tampon of wet cotton to the septum and press it more and more firmly until the morbid spot bleeds. Doctor Baumgarten uses the galvanic cautery or chromic acid, and sometimes both. The latter is preferable, and one of the most excellent of hæmostatics.—*Kansas Medical Journal.*

Urethral Contusions and Lacerations.—Doctor Reineking says: Make careful attempts to introduce a soft catheter, and, if successful, leave it in place for five or six days, irrigating the bladder daily with boric-acid solution; after that time the reintroduction, if necessary, will generally be easy: Avoid metallic or other stiff instruments; this will also do away with the necessity of general anæsthesia for purposes of catheterization: When a soft catheter cannot be introduced, external urethrotomy should be performed; it should be done at the earliest possible time, so as to avoid extravasation of urine and infection of the peri-urethral tissues: If for any reason urethrotomy cannot be done, supra-pubic puncture constitutes a safe, efficient, and easily executed procedure for purposes of temporary or even permanent relief: As a substitute for puncture, supra-pubic cystotomy may be resorted to.—*Milwaukee Medical Journal.*

Euphorbia Pilulifera.—This agent is used principally in the form of a decoction, which can be made from one ounce of the fluid extract to fifteen ounces of hot water; nevertheless the tincture and fluid extract and the aqueous extract are also in common use. A wineglass of the infusion, or one-fourth to one drachm of the tincture, or fifteen to forty drops of the fluid extract, is the dose.

The cases in which it has produced marked and satisfactory results are those of asthma of any variety, uncomplicated; asthma as the result of bronchitis; bronchitis with sharp, hacking, irritable cough; dyspnœa from emphysema or from failure of the heart centres.

It has also been used with excellent results in spasmodic cramp. It is a comparatively safe remedy in medicinal doses, no case of injurious effects having been reported.—*Northwestern Medical Journal.*

Ustilago Maydis during Labor.—Excellent results are obtained by administration of the fluid extract *Ustilago maydis* in cases of primitive inertia of the uterus. The contractions appear twenty-five to thirty minutes, forty at the most, after the drug has been ingested, and are physiological, there being no convulsive or tetanic character about them. There is no contraction of the cervix, and the drug can be given without danger at no matter what time during labor, acting even better when dilatation is already obtained at the time of inertia. Delivery and the expulsion of the placenta are in no way delayed or prevented. No bad results accrue either to mother or child. This drug has been employed in Germany and America for twenty years, and in obstetrical practice is far superior to ergot.—Doctor V. S. Gromsdeff, in *Vratch.*

Apomorphine.—This medicament cannot be too highly esteemed. It induces emesis promptly, and thereby affords ready relief in croup and capillary bronchitis, whereby it is a great boon to children; moreover, it may be readily employed hypodermatically in subjects who refuse relief or who are under the influence of poison with suicidal intent. In bronchitis, trachitis and catarrhal pneumonia it is one of our best expectorants when employed in doses of one-sixtieth to one-twentieth of a grain. From the fact that it induces emesis by its action through the central nervous system, and not by irritation of the mucous membrane, it is the preferable remedy in inflammatory conditions of the stomach in which emetics are indicated.—Doctor W. A. Carmichael, in *Lancet-Clinic.*

Chloral Hydrate in Labor.—Chloral hydrate assists dilatation of the os. No post-partum hæmorrhage follows, nor is there any delay or difficulty in the expulsion of the placenta. Chloral, I think, might take the place of chloroform, if given in small repeated doses during the long and tedious labor of primiparæ. It does not seem to diminish the expulsive power, and might be further tried; it does relieve rigid perineum, thereby avoiding the use of forceps. For many years I have, from time to time, observed its benefit to the poor, worn-out, and anxious mother, despondent with fear. After a dose of the Chloral the frenzy passes off, and the patient settles down to her travail, which has a happy and speedy result.—Doctor Gardiner, in *Lancet* (London).

A Hint in Prescribing.—Now that the price of empty capsules has become so greatly reduced that they are within the reach of all, even the country practitioner, they should, seemingly, form as much a part of the *armamentarium therapeuticum* of the physician as the pocket-case or hypodermic syringe. Why cause patients to "swallow a bitter pill" in the form of a compressed tablet or tablet triturate, when the taste of such may be effectually masked by enclosing in the popular gelatin capsule? The disguising of the taste, moreover, entails no sacrifice of speedy efficacy, as the gelatin dissolves quickly and exposes its contents to the action of the stomach.—*Therapeutic Notes.*

Benzoin in Surgery.—Doctor Garland Sherrill highly recommends compound tincture of benzoin in cases of injuries about the hands, especially those inflicted by machinery. After careful cleaning, disinfection, and complete arrest of hæmorrhage, a layer of absorbent cotton is placed around the wound, over which the tincture is poured until the cotton is saturated. This forms an air-tight aseptic coating after evaporation of the alcohol, and is very advantageous in practice, because it need not be frequently changed—sometimes it can be left on for a week without inconvenience. If it becomes loose, a little more Benzoin tincture may be added.—*American Medical Compend.*

Prostatic Hypertrophy.—It seems to me that subcutaneous torsion of the spermatic cord, so as to cut off the blood supply of the testis, causing its subsequent atrophy, would be as effectual in man as it is in animals, and thus secure prostatic atrophy with as much certainty as by castration. This procedure would be much more readily accepted by the patient, in that it is merely a manipulative operation, free from the "cutting" and deprivation of organs which is so naturally repugnant to his mind.—Doctor C. E. Richmond, in *Lancet* (London).

Bronchitis.—

℞ Carbonate of ammonia, 40 grains.
Spirit of chloroform, 4 drachms.
Infusion of senega, 8 ounces.

Tablespoonful every four to six hours.—Fothergill.

℞ Tincture sanguinaria, 2 drachms.
Tincture lobelia, 2 drachms.
Wine of ipecac, 4 drachms.
Syrup tolu, 1 ounce.

Teaspoonful every three hours.—Bartholow.

Acne of the Face.—The following formula has been employed at St. Louis Hospital, Paris, with success:

℞ Fresh lard, 750 parts.
Sublimed sulphur, 105 parts.
Beta-naphthol, 30 parts.
Styrax ointment, 30 parts.

To be applied with strong friction every night for a week, then interrupted for six days, when it may be repeated if necessary.

—*Lyon Médical.*

Valerianate of Amyl.—A writer in the *Medical Record* says that in two-and-a-half-grain capsules every half-hour, up to five or six doses, this agent will relieve the pain of nephritic colic or of cystitis, though it has no influence on the calculus.

Medical Progress.

Ergot in Varicose Veins.—The physiological action of Ergot, causing contraction of the non-striated muscular fibre, is so constant that we may well say this is its chief and general characteristic. This action has been noted by all observers, and is so intense that in cases of ergotism produced by eating bread contaminated with it, for a considerable time the circulation in the smaller blood-vessels, arterioles and capillaries is impeded to such an extent that gangrenous spots appear, and in some cases the death of an entire extremity has been known to ensue.

This action has been a hint for the use of Ergot in aneurysm—with benefit in some instances; but I have yet to see in print or to hear in any medical meeting a recommendation of the same drug in cases of varicose veins. I do not pretend to say this is a new use of the remedy, but it is new to me, and certainly is not as popular as I believe it deserves to be.

Several years ago it was suggested to me for a lady suffering from varicose veins. The improvement was slow but steady, she having no lapses, and in a few months being practically well. Since that time Ergot has been my chief remedy, giving relief invariably, and in a number of cases producing practically a cure.

A short history of the treatment of the worst case I ever saw, with the most gratifying results, is my apology for this article:

Mrs. E——, aged 38, mother of six children, sent for me one night to arrest hæmorrhage from a ruptured varicose vein. When I arrived I found syncope had relieved the flow and my patient was nearly exsanguinated. She occupied the bloodiest bed in the bloodiest room I ever saw. I fitted a compress over the oozing wound, applied a bandage, and ordered normal liquid Ergot, three drops every hour during the remainder of the night. In the morning I found more improvement than I had dared to expect. But such a pair of legs! - a complete network of varicose veins from the knees down, from the size of a chicken's quill up to the size of my finger. Not a spot large enough to put the end of my finger, without touching a distended blood-vessel. Not so bad above the knees, but some very bad ones. The veins were purple and blue, with a good many black spots, where, she said, she had bled before. She was pregnant, and only just past the fifth month. Not a very cheerful outlook, to say the very least.

I ordered absolute rest in bed, the legs bandaged, and left an ounce of normal liquid Ergot. She remained in bed two days, and then got up and went to work as hard as ever—for she was a hard-working woman, even to helping her husband in the field. Never had her legs bandaged but the twice I did it. Never wore elastic stockings. Never had another hæmorrhage from a ruptured blood-vessel, and improved steadily.

Two weeks prior to the expected time, I was sent for to attend her in confinement, but when I arrived the babe had been born and was being dressed. It weighed ten pounds. Mrs. E—— remarked: "Doctor, this is the largest of any of my babies, and I had the easiest time. We were not expecting it yet for two weeks, and I have been helping George in the potato patch all day."

I examined her legs and found the varicose condition nearly gone. She said she had taken her medicine four times a day up to confinement. These people, being hard put to keep the wolf from their door, and being the honest kind whose greatest concern is to pay every cent they owe, have learned well to make as few debts as possible; consequently, I made but three visits at the time the hæmorrhage took place, and did not see her again until she was confined. I must say I do not remember of ever having seen any remedy accomplish more, in the face of such adverse conditions.

I am aware this paper is open to criticism, inasmuch as it does not touch upon the many and varied causes of this malady, but all that can be found elsewhere. If the coatings of the blood-vessels were strong enough to resist the blood pressure, from whatever cause, there would be no varix; and to what extent the dilatation is compensatory, and consequently the lesser evil, I do not know. Or is it possible we have here a drug deeper-reaching in its action, abrogating the cause as well as causing tonic contraction, thereby giving nature a chance to heal and strengthen the weakened parts? But as the sole duty of the physician is to cure his patient in the shortest, safest, and most permanent manner, should we not be satisfied, especially in this case, where no bad effects whatever were observed?

Possibly the remedy promoted an easy and earlier delivery, as the bones of the child's head were rather soft though not unusually so, and the event anticipated the expected time two weeks. But as the youngster has been in perfect health, no harm was done him, even though he can celebrate his birthday two weeks sooner.

Had the remedy brought on an abortion fatal to the child, was not the emergency of the case a sufficient warrant even for that, since her condition was such that unless an early and favorable change was brought about, these repeated hæmorrhages might have proved calamitous?—Doctor J. Ferris, before the Cincinnati Medical Society.

Skin Diseases.—Familiar appellations for skin diseases are not confined to the laity. The most diverse, ridiculous, and unmeaning terms have been applied to these affections, such as "tetter," that usually refers to eczema, or may mean psoriasis or lupus. "Baker's itch," "grocers' itch," "milk crust," "tooth rash," are also used to designate some form of eczema.

"Liver spots" may refer to chloasma, a pigmentary affection, or to tinea versicolor, a vegetable parasitic disease.

"The itch," to scabies, a disease caused by the *Acarus scabiei*. The expression "army itch" would lead one to suppose that it was distinct from scabies, yet we recognize it as the same disease.

"Blood boil" has no scientific meaning and is applied to various diseases.

"Hives" is recognized by some as urticaria, by others as varicella (chicken-pox).

"Shingles" means herpes zoster, an acute disease, characterized by an eruption of groups of vesicles upon an inflamed base along the course of certain nerves.

"Prickly heat" usually refers to a disease known as miliaria, an affection of the sweat glands.

"Dandruff," to the dry form of seborrhœa of the scalp.

"Black-heads" (flesh-worms), to comedo, a collection of sebaceous matter in the dis-tended sebaceous glands. The little black-heads are caused by the accumulation of dust and pigment.

"Ringworm" is a vegetable parasitic dis-ease, caused by the trichophyton fungus, and is known as trichophytosis.

"Barbers' itch" is caused by this same fungus upon the bearded portion of the face, and is designated by the term tinea sycosis.

"Fish skin" disease is a congenital affec-tion characterized by dryness and scaling of the skin. Its proper name is ichthyosis.

"Chap" is usually a mild form of eczema, attended with cracking of the skin.—*Health.*

Diphtheria. — This disease must be a general systemic complaint with local manifestations, for the following reasons:

Almost every patient has fever, headache, pains in the back:

When the membrane is torn away, reinfection takes place and the membrane re-forms:

If the disease is treated locally alone, the patient dies from blood-poisoning. — The local treatment is worthless unless some general remedies are used. If the local lesions are treated exclusively, and the general system left untreated, the complications often seem to develop more promptly:

When both local and systemic remedies are used, the percentage of recoveries is larger:

The complications, as seen in many cases, fully demonstrate that it is systemic and local in character:

The fact that it can be transferred to healthy persons by means of water, milk, cups, and spoons, shows it to be infectious in nature:

If a portion of the membrane is placed upon the hand or arm, it takes on the form of diphtheria:

Scarlatina and albuminuria are frequent and final results:

Stimulants are indicated where the heart's action grows weak and infrequent:

Disinfection of bed-clothing, cups, plates, spoons and rugs used in the sick-room, is an excellent *precautionary measure:*

The sick-room could be better handled if furniture and curtains were removed.—Doctor Luigi Doane, in *Medical Brief.*

Compensatory Action of Cerebral Hemispheres.—Assuming that sleep is most profound during the first two or three hours, and that the left cerebral hemisphere, being normally the seat of the speech and right-hand centres, is more active in the waking state, and therefore more exhausted and less accessible to stimuli than the right during sleep, it was found that on lightly tickling either side of the face of ordinary persons in this stage of somnolence, the sleeper made repellent movements invariably with the left hand, even when lying on the left side and it was necessary to withdraw the arm from beneath the body. In eight left-handed persons the right arm alone was moved. These experiments are demonstrative of the compensatory or vicarious action of the one cerebral hemisphere during deep sleep. As further illustrations of the point, in dogs exhausted by complete deprivation of sleep, reflex movements only occurred on one or the other side, alternating periodically as if one-half of the brain were temporarily asleep. In cases of left hemicrania with disturbance of speech and writing, the latter act could be

accomplished with the left hand better during the attack than at other times.—De Manacein, in *Centralblatt fur Neurologie.*

The Glycosuria of Pregnancy.—It is as well to know that the appearance of sugar in the urine of puerperal women is not, *per se*, to be accepted as evidence of any morbid condition calling for urgent measures. Sugar, in greater or lesser amount, is present, according to Doctor Lewers, in the urine of most puerperal women, but even when comparatively abundant its presence is not necessarily associated with the classic collateral symptoms of glycosuria. The amount, indeed, stands in some sort of relationship to the lacteal secretion, or rather excretion; when the flow is free, whether copious or otherwise, the amount of sugar discoverable in the urine is small; if, however, the output of milk is checked in any way, mechanically or otherwise, a certain proportion of the lactose is eliminated by the kidneys, giving rise to passing glycosuria. Belladonna, probably by reason of its effect in diminishing the excretion of milk, increases the percentage of urinary sugar. It is to be supposed that the glycosuria disappears when lactation comes to an end, but as a matter of fact it has seldom been possible to continue the observations a sufficient length of time to ascertain this point by direct examination.—*Medical Record.*

Results of Extirpation of Poison Glands in Snakes.—Experiments were undertaken by Phisalix and Bertrand to determine whether the toxicity of the blood of poisonous reptiles is due to an inner secretion of the poison glands, the toxicity of the blood being then dependent on absorption from the poison glands; or whether the glands act simply as a filter, extracting the poison from the blood. If the first were true, the toxicity of the blood would be much diminished by extirpation of the glands; if the second were true, the toxicity would be much increased. A large number of poisonous snakes suffered the operation of extirpation of the poison glands, the results proving beyond question that the first hypothesis is correct—that the toxicity of the blood is dependent on absorption from the secretion of the poison glands. After operation the toxicity of the blood was found steadily to decline for about fifty days; then it began gradually to increase, becoming about normal again in two and one-half months. This is held by the authors as indicating a slow vicarious reëstablishment of gland function, and as direct proof of internal secretion of the poison glands.—*Proceedings of Académie des Sciences.*

Danger of Laparotomy under Gas-light.—Zweifel has observed on several occasions when laparotomy has been performed by gas-light, that not only the patient, but even the operators, experienced a slight roughness of the throat, especially when the operation was a protracted one. Several patients who had undergone operations at the Gynæcological Clinic at Leipzig, in which this roughness was experienced, subsequently developed catarrhal pneumonia. A patient who had completely recovered after operation, afterwards succumbed to this pulmonary inflammation. The cause is sufficiently obvious: The chloroform became decomposed by the light of the gas. The smell of the products of this decomposition has sometimes become so pronounced that it has been thought some material was burning in an adjoining chamber.—*Gazette de Gynécologie.*

Abnormality of Genital Organs.—Professor Englisch reports an unusual anomaly of the genital organs. Patient presented a hypospadias, the canal being open almost the entire length of the pars pendula back to the scrotum. The glans and corpora cavernosa were completely divided to a point two centimeters behind the corona glandis; in erection the two parts became completely separated, coitus being possible only by supporting them together by means of a condom. In this way the patient had become the father of one child. By means of a surgical operation the two parts of the penis were united and a urethral canal constructed to the head. Behind there remained still a small fistula. In literature there has been reported only one other such case.—*Internationale Klinische Rundschau.*

Rupture of Spleen during Coitus.—A curious chapter in pathology could be written by one who could collect the histories of the various accidents occurring during coitus. Local troubles, such as rupture of the penis, rupture of the vagina, penetration of the bladder, would be found with some frequency. Attacks of epilepsy and of cerebral hæmorrhage have also been noted. Among the strangest of all accidents is one recently reported by Harrison, of Bristol, England, namely, rupture of the spleen.

The Medical Age.

VOL. XIII. DETROIT, APRIL 25th, 1895. No. 8.

Original Articles.

EXPERT TESTIMONY.*

BY SAMUEL W. BURROUGHS.†

We are taught that an expert is one who is versed in any science, art, or trade, and in law is one who by learning, observation and practice has become experienced in the art of his profession.

He has also been defined as a skillful and experienced person; one having knowledge and experience on certain subject matters of certain professional avocations.

He is therefore accepted by law as a scientific witness for the purpose of giving expert *testimony* in support of the prosecution, or on behalf of the defense, depending upon the truth of the matter and upon which side he is called.

A party having made the application for the introduction of expert testimony, and the court having ruled that the matter of inquiry and investigation is one upon which the opinion of an expert may be received, and that the witness introduced possesses the necessary skill in the subject matter of inquiry, the examination of the expert witness is next in order.

It is highly important, however, that such examination should proceed strictly in accordance with well settled rules governing the introduction, admissibility or rejection of his testimony, as the case may require.

These rules, which have been found necessary in the admission or exclusion of expert testimony to establish the truth in relation to the subject matter of inquiry, are to be strictly adhered to; and in the examination of all such witnesses it is exceedingly essential that questions should be so framed by counsel as not to call on the expert for a review of the testimony given by other witnesses in the case.

The expert should not be allowed to draw conclusions of fact from the testimony of other witnesses in the case. To allow such conclusions would be to pass upon the credibility of the other witnesses, and therefore cover the very questions to be submitted to the jury.

As expressed in the opinion of a celebrated case:

> A question should not be so framed as to permit the expert witness to roam through the evidence for himself, and gather the facts as he may consider them to be proved, and then state his conclusions concerning them.* —The object of all questions to experts should be to obtain their opinion as to the matter of skill or science which is in controversy, and at the same time to exclude their opinions as to the effect of the evidence in establishing controverted facts.

Whenever a question is so framed by the examiner to an expert, the answer to which would necessarily draw a conclusion of fact, it should be excluded; for it is not the duty of an expert to reconcile a conflict of testimony.

It is for the jury to pass upon the credibility of all the witnesses in the case at bar, and to find the facts, and to govern their verdict accordingly, having heard all the testimony, and having received from the court proper hypothetical instructions in law applicable to and bearing thereupon—whether by request or in general.

In the case of State *vs.* Feller, 25 Iowa, 67, 74, the following question by the examining counsel was propounded to an expert witness:

---

*Read before the Wayne County Medical Society.

†Ex-Prosecuting Attorney for Wayne County, Michigan.

*18th N. Y. Sup. Ct., 202.

From the facts and circumstances stated by previous witnesses, and from those testified to by still other witnesses, relating to the homicide, and from defendant's conduct on the trial, is it your opinion that the defendant was sane or insane when he committed the act?

The question, upon objection, was held to be improper, and answer thereto was excluded for the reason that it would have placed the expert in the place of the jury, whose province it was to have decided this very question.

The question should have been framed something like this:

Assuming the testimony of the previous witnesses tending to show the circumstances, if any, leading up to the act, and tending to show the acts of defendant, if any, in relation to the homicide, to be true, and tending to show that the conduct of defendant, if in immediate connection with the act, was that, or was not that, of a sane man, as the case may have been,—state whether, in your opinion, at the time he committed the act defendant was sane or insane?

It is easily to be seen that the difference in form between the two questions is very distinguishable in this, that an opinion of the expert witness by way of answer predicated upon the latter question, if either way, would have been left with the jury for what it was admissibly worth, leaving at the same time the veracity of the previous witnesses, upon whose testimony the opinion was based, with the jury—exclusively.

Experts are not allowed to draw inferences or conclusions of fact from the evidence. Their opinions should be asked upon a hypothetical statement of facts.

The Supreme Court of Massachusetts in the case of Dickinson *vs.* Fitchburg, 13th Gray, Mr. Chief Justice Shaw delivering the opinion, stated:

In order to obtain the opinion of a witness on matters not depending on general knowledge, but on facts not testified of by himself, one of two modes is pursued: either the witness is present and hears all the testimony, or the testimony is summed up in the question put to him. And in either case the question is put to him hypothetically — whether, if certain facts testified of are true, he can form an opinion, and what that opinion is?

In framing the hypothetical question, counsel may base it upon the hypothesis of the truth of all the evidence, or on a hypothesis framed on certain facts assumed to be proved for the purpose of the inquiry.

If framed on the assumption of certain facts, counsel may assume the facts in accordance with his theory of them, it not being essential that he should state the facts as they actually exist, but as they appear in evidence, leaving it to the jury to determine whether such be the facts from the evidence in the case.

If it were the law that a hypothetical question could not be put for an answer to an expert unless the question states the facts as they exist under all circumstances, it would under such a rule be manifest that in a trial where there is a dispute as to the facts, there would be no room for a hypothetical question. The very meaning of hypothesis is that there must be a supposition or assumption of something for the time being.

In every issue each side has its theory of what the state of facts is, and therefore assumes that it can be proven to the satisfaction of the jury, and, thus assuming, shapes hypothetical questions to expert witnesses accordingly for the basis of their opinion.

Counsel may make an error in their assumption of facts in this regard; but this of itself would not render the question wholly objectionable if it came within the possible or probable range of the evidence upon which it was predicated. In other words, the testimony should tend so near as possible to establish every supposed fact embraced in the question put to the expert witness. If the hypothetical question is clearly exaggerated and unwarranted by any evidence in the case upon which to base it, an objection to it should be sustained; for, as declared by our own Supreme Court in Frazer *vs.* Jennison 42 Mich., 206:

Counsel should not be permitted to embrace in a hypothetical question anything not proved or offered to be proved.

If, therefore, it should turn out that the question includes circumstances which are neither proved, nor as to which there is any tendency of proof, then the court should instruct the jury to disregard the opinion based upon it. But if, on the other hand, there is any evidence tending to prove the facts

assumed, the jury should be allowed to weigh the evidence, and determine whether the supposed facts so stated correspond with the facts as proved.

If there is no dispute as to the facts upon which the expert witness is to found his opinion, then the question should be so framed as to embrace all the facts, so that the witness may take them all into consideration.

Various forms of inquiry have been adopted, according to the circumstances of various cases. The inquiry, whether it states facts, or puts facts hypothetically, or refers to the testimony of witnesses as being true, should be so framed as to give the witness no occasion to decide upon the evidence, or mingle his own opinion of the facts as shown by the evidence with the facts upon which he is called to express a professional opinion.

Hypothetical questions are sometimes by mistake put by lawyers—and good ones, too—so as to require the witness to decide upon the evidence, to find conclusions from the evidence, to reconcile conflicting facts and to determine which side preponderates. Such questions clearly seek the opinion of the expert witness on the merits of the case, and are therefore very improper though perhaps hypothetical in construction.

In some cases all the facts bearing on the issue might be summed up in a single question.

When facts on one side conflict with facts on the other, the two sets are not to be incorporated into one question, but their opposing tendencies should be called to the attention of the witness; and if his knowledge can furnish the explanation, from an expert standpoint, which harmonizes them, he should be at liberty to so state it as to enable the jury to know all the facts on which the opinion is based.

There are exceptions to these rules. Where a medical expert had read the deposition of plaintiff, detailing minutely the injuries and bodily condition resulting from an injury which he related, it was held proper to ask:

From the knowledge gained by reading the deposition, what is your opinion as to plaintiff's condition, and as to the cause of that condition, at the time the deposition was made?

Where an expert has heard or read the evidence, there is no reason, it seems to me, why he might not form as correct a judgment based upon such evidence—assuming, of course, it to be true—as if the same evidence had been submitted to him in the form of a hypothetical question.

The opinion of an expert should not be predicated on anything less than the entire testimony, if possible, whether actually or hypothetically presented.

The advantage of the usual hypothetical question, including the substance of the whole testimony, is so great that it should not be sacrificed when the circumstances of the case plainly call for it. In other words, so that the jury may know with certainty upon what state of facts the expert bases his opinion, the hypothesis should be clearly and precisely stated under all circumstances.

As an illustration I quote the hypothetical question propounded by the defense in the case of the Government against Guiteau:

Q.—Assuming it to be a fact that there was a strong hereditary taint of insanity in the blood of the prisoner at the bar; *also* that at about the age of thirty-five years his own mind was so much deranged that he was a fit subject to be sent to an insane asylum; *also* that at different times after that date, during the next succeeding five years, he manifested such decided symptoms of insanity, without simulation, that many different persons, conversing with him and observing his conduct, believed him to be insane; *also* that in or about the month of June, 1881, at or about the expiration of said term of five years, he became demented by the idea that he was inspired of God to remove by death the President of the United States; *also* that he acted on what he believed to be such inspiration, and as he believed to be in accordance with the divine will in the preparation for, and in the accomplishment of, such a purpose; *also* that he committed the act of shooting the President under what he believed to be a divine command which he was not at liberty to disobey, and which belief made out a conviction which controlled his conscience and overpowered his will as to that act, so that he could not resist the mental pressure upon him; *also* that immediately after the shooting he appeared calm and as if relieved by the performance of a great duty; *also* that there was no other adequate motive for the act than the conviction that he was executing the divine will for the good of his country,—assuming all of these propositions to be true, state whether, in your opinion, the prisoner was sane or insane at the time of shooting President Garfield?

This hypothetical question having been put to several experts, their answer was invariably, "Insane." And, the counsel having propounded this question, expecting the answer of insanity, based on the facts assumed to have been proved in accordance with their theory of the case, counsel for the Government propounded a still longer hypothetical question to the same witnesses upon cross-examination, basing the same in form alike on the facts as appeared in evidence by other witnesses tending to show in connection with the prisoner mental activity, guarded deliberation, and premeditation, and thereby drew from these same expert witnesses an expression of opinion which tended to show that, at the time of the shooting, the prisoner was sane.

So it will be observed that the opinions of these experts as to Guiteau's sanity or insanity could have only aided the jury in the rendition of a just verdict after the jury had found which of the two opposing hypotheses under the testimony of the former witnesses was correct in fact. And in this, it seems, the jury experienced little or no trouble, for in finding respondent guilty they found that at the time of the shooting he was sane, and therefore doomed him to pay the penalty of life for life.

The jury acted in this case upon well settled principles of law, as follows:

The testimony of experts is to be considered like any other testimony, and is to be tried by the same tests, and receive just so much weight and credit as the jury may deem it entitled to, when viewed in connection with all the circumstances.*

Expert testimony is given for the purpose of enlightening the jury, and not for the purpose of controlling their judgment. Its influence must be legitimate, and must be of such a character as to outweigh, by its intrinsic force and probability, all conflicting testimony.

It has been held:

The jury cannot be required by the court to accept, as a matter of law, the conclusions of the witnesses instead of their own.†

Upon the jury rests the responsibility of rendering a correct verdict, and if the testimony of the experts is opposed to the jury's convictions of truth, it is their duty to disregard it.*

It is also improper to so interrogate a medical expert as to elicit an opinion as to the law of the case; for instance, to ask him whether a certain person possesses mental capacity sufficient to enable him to make a will. He should only be required to state the degree of mental capacity or imbecility of the person, as the case may be, by the use of such terms as will best convey his ideas of the matter. If he had personal knowledge of the person making the will, as his patient at the time, from examination, treatment, and observation, and was familiar with his personal characteristics, he might with legal propriety be asked whether the testator's mind and memory were sufficiently sound to enable him to know and understand the business in which he was engaged at the time he executed the will. And an answer from the expert would be pertinent.

While the opinion of experts may be based on their observation and experience in similar cases, yet the principle is well settled that such witnesses cannot, on their direct examination, be questioned concerning the particular cases which have happened to come within their observation, and which have no connection with the case in hand.†

It is not necessary to assume a state of facts in those cases in which the expert is personally acquainted with the material facts in the case. If a physician visits a person and from actual examination and observation becomes acquainted with his mental condition, he may state to the jury his opinion as to the sanity or insanity of the person at the time when he made such examination and observation.

And so experts having personal knowledge of the facts, and their competency in this regard having been first established, have been permitted to testify:

That an article was properly stowed in a vessel:‡

*Carter *vs.* Baker, 1 Sawyer, U. S. C. C., 512, 525.

†Anthony *vs.* Stinson, 4 Kans., 221.

*United States *vs.* McGhee, 1 Curtis, C. C., 1, 9.

†1 Greenl. Ev., § 448.

‡Price *vs.* Powell, 3 N. Y., 322.

That a wall was properly and compactly constructed:*

That the abutments of a bridge were properly and skillfully placed, and sufficient to discharge water in time of flood:†

That a machine was constructed in a workmanlike manner:‡

That a physician is competent to prove that a person is sick, or so sick as to require medical advice:§

But in Michigan it is held:

That no witness, medical or otherwise, can be allowed to give testimony from his observation concerning the nature of a person's illness or its causes, without proof both of a sufficient examination, and such knowledge or experience as will qualify him to offer an opinion:‖

That the opinions of physicians and surgeons are admissible as to what would be the natural and probable results of wounds, and whether they were sufficient to cause death.¶

And so, where a medical expert had made an examination of the uterus of a deceased woman, it was held proper to interrogate:

Q.—What, in your opinion, caused the death of the person from whom the uterus was taken?**

(*To be continued.*)

LECTURES ON THE HISTORY OF MEDICINE.††

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 212.*]

During the eighteenth century also arose the illusory doctrine of Animal Magnetism, which attained among all classes a following that can be accounted for only by the attractiveness of the marvellous and unexplained. Frank Mesmer, born near Lake Constance in 1754, was early a victim of romantic yearnings, and his graduating thesis (delivered in Vienna) dealt with the influence of the planets upon man, and the use of the magnet. After traveling extensively he erected a private institution, where he treated blind girls, fidgety old maids, and simpletons, until his deceptive methods were unmasked by a commission appointed by the Empress Maria Theresa, and he was compelled to leave Vienna in twenty-four hours. This martyrdom recommended him in Paris, where the so-called Mesmerism speedily became fashionable. He finally undertook instruction in magnetizing, at the rate of 100 louis a head, and founded the "Order of Harmony." His so-called *baquets* were tubs with magnetic ducts, partially filled with soft water and all kinds of ingredients, and armed with iron conductors, with which his pupils, joining hands, placed themselves in contact. At these séances Mesmer appeared in lilac-colored clothes, and professed to reinforce the action of the tubs by looks, gestures, playing upon the harmonica, and touching the subjects with wand or fingers. "If any one, particularly a lady, had a crisis at this time, she was borne to the 'crisis-chamber' by Mesmer himself, where he treated her alone; as only when alone, he claimed, could he attain success." He speedily became wealthy; managed to deceive even the Queen of France; and when he threatened to deprive the country of his presence, 20,000 francs were offered him to instruct others in his art; this offer, however, the wily charlatan declined. In 1785 some fool penned an article extolling him as a worker of miracles; this stimulated the authorities to organize a committee of investigation, the adverse decision of which, along with some contributory evidence, made Paris too warm for him. After the Revolution he returned, but his day had passed, and he figures no more in medical history. He has had many imitators, and the mesmeric craze at times has infested the different portions of the civilized globe; even some who were eminent in science have fallen into the snares of so-called Mesmerism—notably Olbers, the discoverer of a number of asteroids. Mystic medical doctrines founded upon Mesmer's views still continue in certain circles, though

---

* Pullman *vs.* Corning, 9 N. Y., 93.

† Cosohocton Stone Road Co. *vs.* Buffalo, N. Y. and Erie R. R. Co., 10 N. Y., 523.

‡ Curtis *vs.* Gano, 26 N. Y., 93.

§ Chicago, Burlington & Quincy R. R. Co. *vs.* George, 19 Ill., 510.

‖ People *vs.* Olmstead, 30 Mich., 434.

¶ State *vs.* Powell, 7 N. J. Law, 295. Livingston *vs.* State, 14 Va., 592. State *vs.* Morphy, 33 Iowa, 272.

** State *vs.* Glass, 5 Oregon, 73.

†† Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

the majority have long since succumbed to the advances of scientific psychology.—In this connection it is proper to speak of the revived interest in "animal magnetism" due to the researches of Doctor James Braid, of Manchester, England. This gentleman in 1842 published a work which pretty thoroughly exposed the fallacies of the doctrine of Mesmer, and expounded many of the truths that were entangled therein. He was among the first, perhaps, to employ the phrase "animal magnetism," and was the author of the term "hypnotism," though in his day the popular title was *Braidism*.

During the middle of the eighteenth century arose a doctrine that in its novelty, ease of practical application, and apparent consistency (through the ingenious employment of certain vital phenomena), secured such a hold that its influence continued even into the present century. This was the "Brunonian doctrine," promulgated and upheld by the great foe and rival of Cullen, Doctor John Brown. In youth very precocious, though of most humble birth, Doctor Brown had mastered the Latin language at the early age of seven years, and three years later essayed to learn a trade. At the age of twenty he left his native village of Dunse for Edinburgh, seeking employment as a tutor and intending to study theology. Poverty soon compelled him, however, to take a rural school, but he returned a few years later (in 1759) to the Scottish Athens and began the study of medicine, supporting himself meantime by rendering theses into Latin and by teaching, translating, and quizzing. Finally he attracted the attention of Cullen, to whom he became useful through his knowledge of the classics; but ultimately a foolish quarrel made bitter enemies of the former friends. In 1770, in private lectures, Brown began to advance the theory to which he had been led by one of his own attacks of gout that disappeared under the use of stimulants, the disease before having always been aggravated by the treatment prescribed and that was held to be orthodox, viz., antiphlogistic. He had now become somewhat dissolute, and the students he gathered about him were of very much the same character; but they formed the nidus of a great following opposed to Cullen, and quarreled on all occasions with the adherents of the latter. Finally Doctor Brown removed to London, where fortune seemed to smile upon him, as he gained rapidly in reputation and practice; indeed, he barely missed a call to Berlin, and another to Padua, as a teacher, the scale being turned against him by his dissolute habits. Though possessed of the highest mental gifts, Brown was unfortunate in lack of mental stamina. He taught that life is not a natural condition, but an artificial and necessary result of constant irritations; all living beings, therefore, tend toward death. Health is an intermediate grade of excitement; diseases, which are either sthenic or asthenic, represent either too high or too low a grade of excitement. It has been said that Brown's teachings slaughtered more human beings than the French Revolution and the wars of Napoleon combined. In England this system found no important followers, but in America Benjamin Rush of Philadelphia (1745–1815) distinguished himself as an adherent. In Spain and France it found little place; but in Italy, and later in Germany, it secured a numerous and important following, which numbered, among others, Scarpa, Massini, and Girtanner.

Another system which attained influential development, extending even into the present century, was the so-called *Realism*, originated by Pinel (1745–1836). Born in poverty, and designed for the Roman Catholic church, Pinel did not turn his attention to medicine until his thirtieth year, but on completing his studies he rapidly rose to positions of importance. Led to the investigation of mental diseases by the fate of one of his particular friends, who had become insane, escaped into the forest, and was there devoured by wolves, Pinel speedily developed a great interest in this class of sufferers. The lot of the insane at this time was most pitiable: they were imprisoned, chained, and treated worse than wild beasts. In his efforts to improve their lot, Pinel acquired the title of conservative and aristocrat, either of which was almost equivalent to a death sentence. Unterrified, however, he appeared before the Paris Council and urged the adoption of reformatory measures, replying to the challenges of skeptical and self-regardful opponents by liberating a number of insane patients who were in

his charge. The courage thus exhibited receives appreciation in our time, if never before. Not the least of Pinel's services was the substitution of analytical for synthetic methods; he also sought to determine disease by a diagnosis carefully constructed from symptoms, but unfortunately he made pathology and anatomy subordinate factors. A pupil of Barthez, he placed his preceptor's vitalism far in the background.

François Bichat, born in 1771, earned high rank both as a clinician and an anatomist. His education was begun in Nantes, but he studied surgery and anatomy in Lyons and Montpellier, subsequently going to Paris, where he became a member of Desault's family. After the death of his patron he lectured on surgery, and from 1797 on anatomy. Possessed of a feverish scientific activity, he became a member of the Société d'Emulation. Death overtook him in 1802 as the sequel of consumption and an injury received through a fall. He was the most capable physician of France in his time, and, brief as was his span of life, he was author of nine important volumes, the chief of which were a "Treatise on Membranes" and works on General and Pathological Anatomy. From the latter a new tendency in study took origin. He it was that gave utterance to the aphorism: "Take away some fevers and nervous troubles, and all else falls to the kingdom of pathological anatomy." As an evidence of his energy, it is related that he in one winter examined 700 bodies. He taught how to discriminate between disease processes,—notably subdivided peri-pneumonia into pleurisy, pneumonia, and bronchitis, these having been previously confounded. He once remarked: "You may observe disease of the heart, lungs, abdominal viscera, etc., night and morning, by the sick-bed, for twenty years, yet the whole furnishes merely a jumble of phenomena which unite in nothing complete; but if you open a few bodies, you will see the obscurity speedily give way—a result never accomplished by observation if we do not know the seat of the disease." To Bichat is also due our modern recognition of cellular, osseous, fibrous, and other tissues, as such, wherever they appear throughout the body. He differentiated, without the aid of the microscope, twenty-one different tissues as simple and similar elements of the body, enumerating them as one does the chemical elements; he described the stomach as composed of mucous, serous, and muscular layers; overthrew the speculative tendency of medicine and placed facts in the front rank; and so conspicuous were his services that he has been termed the "Napoleon of Medicine." He supplemented the influence of Pinel upon the side of pathological anatomy; called sensibility and contractility vital properties, whose alterations constitute disease, claiming, however, that the vital properties of individual tissues differed among themselves. His life and works are revelations to young men, and show what can be accomplished at a very early age by sufficiently active and harmoniously developed brains.

In reviewing the theories and lives of those mentioned as medical luminaries of the eighteenth century, one experiences a feeling of mingled respect and disappointment — respect for the devoted way in which they worked and sought the truth, and disappointment at so much waste of intellectual power and labor.—The lesson is also taught, and should be impressed, that in all so-called new systems old principles for the most part reappear, and that the labors of the past are rarely so deliberately consulted as to guard against the repetition and revamping of theories that had long before been proved futile.

Let me now mention a few other of the physicians of the last century who have left more or less of an impress upon their successors and upon our science. One man, in particular, historians are wont to remember with the honor that was denied him by his colleagues and contemporaries. I refer to Leopold Avenbrugger, who was born in Graz in 1722, and who, after pursuing his philosophical and professional studies in his native city, obtained, at the age of twenty-nine, charge of a Spanish military hospital; while thus employed he invented the art of percussion as applied to diagnosis. This he gave the test of experience during seven long years before making it known to the profession, and even then it was not appreciated, but remained practically unnoticed until after his death, which occurred in 1809. He did receive a patent of nobility from the Emperor

Joseph II., but this hardly compensated him for the contumely heaped upon him by his colleagues. Paulus Ægineta employed sounds and specula; Santoro used the balance, counted the pulse, and resorted to the use of the thermometer; Boerhaave employed the thermometer and the simple lens; Floyer, and after him Haller, utilized the watch in marking seconds; a Salernian practitioner utilized auscultation and percussion in tympanites and ascites; but the diagnosis of diseases of the great viscera by percussion was never known before Avenbrugger. His booklet of twenty-two pages, unsalable in his time, is to-day held worth far more than its weight in gold. His famous colleague, De Haën, wrote fifteen volumes without a word on percussion; Van Swieten did it no greater justice; in his great treatise on the History of Medicine, Sprengel barely alludes to it; yet the contents of Avenbrugger's booklet were of more practical value than all that these other men ever wrote, or all the results of the vast and bloody campaigns during which it slept. In 1808 this volume was rescued from oblivion by Corvisart, who translated it into French and proclaimed its undying value.

During the earlier part of this century lived Werlhof of Helmstädt (1699–1767), a far-famed observer, author, and practitioner, who declined a professorship, and especially distinguished himself as a writer of German poetry. Though possessed of an exceptional knowledge of modern tongues, he wrote only in Latin, the scientific language of the day. In 1734 he was appointed physician to King George II., in which position he attained world-wide fame, while indefatigable in his efforts to elevate science. He first described the disease known by his name — *morbus maculosus Werlhofii*,—and struggled hard to establish in Germany the use of cinchona.

From 1740 to 1802 flourished Wichman of Hanover, highly esteemed as a writer and practitioner. He is especially known for his pleas in favor of more scientific diagnoses, and his demonstration of how to make them. The rôle of the itch-mite in the transmission of scabies he demonstrated upon himself: To be sure, Bonomo, a hundred years before, had called attention thereto, but with little avail.

Another eminent Hanoverian was the fickle, stubborn and misanthropic Zimmerman, born in 1728 in Berne, and whom misfortune and disease played many shabby tricks. He was, however, a man of ingenious endowments, and merits especial regard because he sought to free medical science from the charge of being a secret art.

Another of the prodigies of medical history was J. P. Frank, born (1725) in the Bavarian Palatinate, of pauper parents, and while an infant abandoned by a cruel father. His early life was passed in a religious school; at the age of twenty-five he became a court and garrison physician, and later a professor in Göttingen; finally went to Vienna, where he died in 1801. He was greatly beloved by his pupils, and Walther, the famous surgeon, said of him: "No one ever made so elevating and permanent an impression on me." He published an extensive work on forensic medicine and sanitation—wherein he took up the hygiene of the individual, of the family, and of the school—which constituted an effort far ahead of anything of the kind previously known. He is also memorable for efforts toward increasing the population, for the Thirty Years' War had depopulated extensive districts—to such a degree, indeed, that in 1750 bigamy was legalized in Nuremberg and many other towns. Frank was distinguished for a keen and even caustic humor, whose subject was not unfrequently himself.

From 1707 to 1782 there lived in England one Sir John Pringle, chief of the Army Medical Department, known to this day as an author upon military hygiene. John Huxham (1794–1868) advanced our knowledge of putrid dissolution of the blood. John Howard (1766–1790) rendered eminent service in prison reform. Heberden (1710–1801) was the first to describe varicella, and also angina pectoris—which was long known as Heberden's asthma. John Fothergil (1712–1780), a Quaker, acquired fame by his observations on chronic angina, neuralgia, and hydrocephalus; was likewise a benefactor of the poor, regarding them as "bridges to the pockets of the rich;" indeed, a large part of what he gained from the latter class he bestowed in charity, and at his death left £200,000 for the same purpose. Radcliffe (1750–1814) was an eminent, witty, successful

practitioner of London, who was wont to declare that as a young practitioner he possessed twenty remedies for every disease, but at the close of his career had found twenty diseases for which he had not one remedy. Richard Mead (1673–1754) was a prolific writer and the author of the first quarantine regulations adopted in England. Contemporary with Mead was Lettsom, the busiest, most philanthropic and most successful physician of his day, whose practice brought him $60,000 a year, although a large part of it was gratuitous, and who gave away immense sums for charitable purposes; also Thomas Dover, who invented the sedative known by his name, and who died in 1741. Akenside, physician and poet (1721–1770), wrote on dysentery. Baillie, of Edinburgh, was the first to accurately describe the morbid anatomy of gastric ulcer.

Among the French surgeons must be mentioned La Peyronie, of Montpellier, born in 1668, and who ultimately became director of the Academy of Surgery and surgeon to the King. His wealth was employed for the elevation of the craft, and he founded no less than ten different surgical professorships at his own expense. In 1743 he effected the separation of the surgeons from the barbers. He died in 1747, dedicating his estate to the purpose for which he had lived. The most famous of the earlier surgeons of this century was J. L Petit (1674–1750), inventor of the screw tourniquet, and who was sent for to treat Augustus the Strong, of Poland; indeed, several other crowned heads became his patients. Garengeot (1688–1759) was a professor in the College of St. Côme, and published a work on operative surgery. Morand (1697–1773) and Le Dran were distinguished surgeons of Paris, the former especially noted for the number of times he performed paracentesis. Famous lithomotists were Le Cat and Frère Come — whose real name was Baseilhac, and who operated by means of the lithotome caché. Astruc (1685–1766) was a syphilographer of extensive attainment; Quesnay (1694–1774), an eminent and undaunted surgeon of Louis XV., who wrote on the history and progress of surgery in France; Brasdor (1721–1776) was best known for his method of distal ligation in aneurysm; Sabatier (1732–1811) wrote a famous treatise on operations in which he recommended resection of the head of the humerus.

One of the most celebrated surgeons was P. J. Desault (1744–1795), the son of a poor farmer, originally designed for the priesthood, but who, after obtaining a thorough mathematical education, began the study of surgery with an ignorant master of his native town. Subsequently he went to Paris, and here supported himself by teaching, gradually rising step by step until, without collegiate education, he became professor and chief surgeon at the Hôtel Dieu, where he established the first surgical clinic. He opposed violently the prevalent abuse of the trephine, and was also a champion of healing by first intention. A trusted friend of Desault was Chopart, well known because of the amputation of the foot that bears his name. Another well known surgeon, likewise a friend of Desault, was Doublet: and it is somewhat remarkable that Desault, Chopart and Doublet suffered persecution and perhaps martyrdom in connection with the supposed death of the dauphin of France, properly Louis XVII., in 1795. There is evidence that the child who died in the Temple was not the dauphin, but a substitute, and these three surgeons who examined the corpse had the hardihood to express their doubts. The same day that Desault reported upon the evidence, he was invited to dinner by some members of the Convention, was taken ill at the table, and died almost immediately after his return home. A few days later Chopart and Doublet died, also under mysterious circumstances.

Daviel (1796–1862) is remembered among French surgeons chiefly for extraction of the lens as an independent method of treating cataract; Tenon (1724–1816), for his writings on the anatomy and diseases of the eye; and Anel, for originating the operation for aneurysm, mistakenly attributed to Hunter. There were also many others of lesser note who distinguished themselves through special services to surgery or some of its branches.

Among the Italians of this century may be mentioned Scarpa (1772–1832), of Motta, professor successively in Modena and Pavia, and who advanced our knowledge of hernia, diseases of the eyes, aneurysm, and general anatomy.

The most famous Spanish surgeon was Gimbernat, of Madrid (1742–1790), for a time professor in Barcelona, who also became distinguished through anatomical researches.

German surgeons did not rank high during the earlier half of the last century, owing to the contempt engendered for this branch of the medical art by the church. The fashion of imitating the French, however, led to some surgical development. The first German surgeon of scientific education was Heister (1683–1758), of Frankfort-on-the-Main, who, unable to obtain honorable employment in the military service of his own country, entered that of Holland, where he remained until the experience of his own nation had brought about a healthy reaction. In 1720 he came to Helmstädt, where he developed great activity in anatomy, surgery, and botany; also distinguished himself as a dentist and oculist, and discussed the whole range of surgical topics from the least to the greatest.

Bilguer (1720–1796), of Chur, became surgeon-general in Berlin, and performed the first resection of the wrist in 1762; he was an opponent of amputation, which at that time was altogether too frequently practiced.

Von Siebold (1736–1807) was the founder of an institution for surgical instruction, where for the first time in Germany surgery was taught clinically. He became one of the most famous teachers and was first in his native land to perform the operation of symphysiotomy, so recently revived.

The greatest German surgeon of the eighteenth century, however—one eminent both as writer and operator—was August Gottlieb Richter (1742–1812), of Zorbig, a descendant of a ministerial family, who wrote a famous work on hernia, and greatly improved all branches of surgery; he it was that enunciated the principle of dressing wounds "quickly, easily, and rarely."

Among English surgeons of the century must be mentioned first of all Cheselden (1688–1752), whose name is inseparably connected with anatomy and pathology as well as surgery. At first a warm advocate of the high operation for stone, his dexterity in lithotomy excited the wonder of his contemporaries. He published a treatise on anatomy, and one on the supra-pubic section.

Alexander Monro, Sr. (1697–1767), of Edinburgh, was also eminent in both anatomy and surgery, and contributed more than any other one man to the success and reputation of the Scottish medical school. His sons Alexander and Donald, and his grandson Alexander 3d, were equally celebrated in anatomy.

Charles White, of Manchester, is generally credited with having performed, in 1768, the first subperiosteal resection of the head of the humerus, although as a matter of fact this was not done until 1774, and then by Bent of Newcastle. He also performed resection of the hip-joint upon the cadaver—another of the same name, Anthony White, having done the operation upon the living subject in 1721. He invented the method of reducing dislocation of the humerus with the foot in the axilla—a procedure that is ordinarily ascribed to Sir Astley Cooper; also operations for false joint by the removal of the involved surfaces of the bone.

It will be seen that the excision of joints was peculiarly an English method, the elbow-joint having been first excised in 1758, by Wainman, and the knee-joint by Filkin of Northwich. The man who permanently attracted the attention of surgeons to these new operations was Henry Park, a bold surgeon, who wrote in 1782. The merits of these methods were then soon forgotten, however, and were revived in the present century by Liston and Syme.

One of the best known London surgeons was Percival Pott (1749–1787), who became especially eminent through his studies upon hernia, spinal disease, and diseases of bones and joints; his complete chirurgical works appeared in London in 1771.

William Hunter (1718–1783), of Scotch parentage, originally a theological student and a pupil of Cullen, went to London in 1741, began to lecture on anatomy and surgery in 1746, and soon acquired a great reputation as a surgeon, obstetrician, and anatomist. He achieved enormous success in practice, and spent £100,000 upon his house, library, and private collections. The latter now forms the Hunterian museum in the University of Glasgow. His magnificent plate illustrating the gravid uterus required the labors of twenty years, and appeared in 1774

John Hunter (1728–1793), younger brother of William, enjoyed even greater reputation than the latter. He was a pupil not only of his brother, but also of Cheselden and Pott. Beginning the practice of surgery in 1763, he became surgeon to St. George's Hospital in 1768, and surgeon-general of the English forces in 1790. So memorable were the labors and services of this man that at the Royal College of Surgeons of London there is given annually a "Hunterian oration," intended in some way to commemorate his labors or to draw some lesson from his life and work. To do justice to John Hunter would require a volume, hence we must at present dismiss the subject with this brief reference.

Almost equally famous as a surgeon, though by no means such an omnivorous student as Hunter, was Benjamin Bell, of Edinburgh, who died in 1806. He employed tubes of lead and silver for the purpose of drainage. Sir Charles, and John Bell, also of Edinburgh, are eminent names pertaining to the latter part of the eighteenth and first part of the nineteenth century. The latter was professor of anatomy, surgery and obstetrics, a busy practitioner, a fertile writer, and not only one of the most successful operators of his day, but an excellent classical scholar; his "Principles of Surgery" appeared from 1801 to 1807. Sir Charles, who died in 1842, belongs more to the present century, but was equally distinguished as an operator, surgeon, and writer, and best known, perhaps, for his Bridgewater Treatise on the Hand.

Among the Dutch an eminent surgeon was Peter Camper (1722–1789), who, in order to acquire manual dexterity, learned to use various mechanical tools. He was a fruitful author, and did not consider it beneath his dignity to write a treatise about the best form of shoes, published in Vienna in 1782, but recently translated and republished in England as something new. Sandifort, of Leyden, discussed ruptures, dislocations, etc., and reported the first observation of downward dislocation of the femur.

As already noted, the surgeons of the eighteenth century were often obstetricians —William Hunter conspicuously. The most important obstetrician of his time was William Smellie (1680–1763), of London, who invented numerous instruments, wrote a large treatise on the theory and practice of midwifery, and greatly advanced our knowledge of deformed pelves. He was the first to distinguish one diameter from the other, and to point out the importance of cephalic version and version of the breech.—Parenthetically, it may be remarked that William Hunter, great as he was, was the uncompromising foe of instrumental midwifery, and was in the habit of showing his forceps, covered with rust, as evidence that he never resorted to such aids. A rival of Smellie and Hunter was Thomas Denman (1753–1815), best known, perhaps, because of his demonstration of the portability of puerperal infection.

The researches of anatomists during the eighteenth century were for the most part directed towards the minute, more difficult, and less striking parts, and to increased thoroughness and accuracy of description. Microscopical anatomy suffered a relative quiescence. Pathological and general anatomy, which were destined to control the medicine of the succeeding century, were newly created, and not yet regarded as sciences by themselves, but merely as special branches. The most important feature was the revival and more accurate study of experimental physiology, which had been scarcely resorted to since the time of Galen, except for Harvey's discoveries. This revival, which really seemed an epoch in the history of medicine, was effected by the great Haller (1708–1777), of Berne, a man who really deserved the title of "Great," as he was a universal and indefatigable savant, possessed of thorough conscientiousness, marvellous capacity for work, great ingenuity, natural endowments, and an inextinguishable love for art and science; he was certainly one of the most versatile scholars and thinkers of any time, distinguished not only in his chosen field of medicine, but as a poet, botanist, and statesman. Like all Swiss poets, he never passed beyond the didactic and the homely in his versification. From his tenth year he wrote poems in Latin and German, and even when eight years old had made most extensive compilations from Bayle's dictionary. At fifteen he went to the University of Tübingen, where in the second year of his sojourn he disputed with one of his teachers. In 1725 he went to Leyden, where Boerhaave and Albinus found in him

a most indefatigable follower. At nineteen he received the degree of Doctor. In the excess of his zeal for anatomy he purchased for a considerable sum, from Albinus, half of a corpse, the other half of which his teacher had dissected; and while in Paris he even engaged in grave robbing, and, being betrayed by his own carelessness, was compelled to save himself by flight. In many other States and in more than one country he studied with the best of teachers, lecturing at times himself. At the age of twenty-six he became professor and hospital director at Berne, and in 1752 published his famous researches on irritability. Three years later he accepted a call to Göttingen as professor of anatomy, surgery, chemistry, and botany. He was the founder of a botanical garden; for many years was so busy that he slept and lived in his library; and in spite of his enormous and unique correspondence with the savants of the world, he never left a letter unanswered. Strange to say, his permanent influence upon the practice of medicine was only indirect; and although he was professor of surgery, and performed many vivisections, he was never able to persuade himself to perform a single surgical operation upon the living human being. He it was that introduced into Germany the use of the watch in counting the pulse. Like Hunter, Haller demands a special historian, and it is possible here to outline only a few of the services he rendered to medicine. He enriched the anatomy of the heart, of the brain and dura, and pointed out the venous nature of the sinuses; taught that the uterus should be regarded as a muscle; advanced the knowledge of the lymphatic system, and believed in and taught a developmental theory that every individual is descended or derived from a preceding one. In the mechanism of the heart, his doctrine of irritability especially maintained itself. He administered the death-blow to the doctrine of vital spirits, and was in fact the father of modern nerve physiology. His doctrine of irritability moved the minds of his century in a way that has no parallel, unless we compare it with the doctrine of Darwin. Glisson had established the general principles of irritability; and Haller followed, teaching it by the inductive method, and proving its existence by experiments—proving, moreover, that it is a peculiarity of the muscular substance and not governed by ordinary sensation. His researches deserve the more credit because he lacked modern aids to physiological study The first physiological institute was founded in Breslau by Purkinje, some fifty years ago; Haller had no such opportunity; even his successor, the great Müller, possessed no such advantages. The profound impression made by Haller's teachings may be measured by the number of his supporters and opponents; he was a great man, second in widespread influence only to Boerhaave, and one who left a more lasting impress upon the world than even the latter.

The two best known of Haller's opponents were: Wolf (1733–1794), of St. Petersburg, who regarded each generation as an actual new creation, and was the first to teach the doctrine of the blastodermic membranes; and Blumenbach (1752–1840), of Gotha, who did great service by investigations in general anthropology, of which he was in fact the founder, and whose researches in comparative anatomy and the history of development have rendered him famous.

Of the famous anatomists of the century may be mentioned Sömmerring (1755–1830), of Frankfort, the first to distinguish the facial and auditory nerves from each other, and whose published works are well known because of the beautiful illustrations furnished him by the well known artist Koeck.

The ablest French anatomist of the century was Winslöw (1669–1760), a man of Danish birth, but who became a professor in Paris, and is best known by the foramen named for him. There were also Portal (1742–1832), physician to Louis XVIII., who wrote a famous history on anatomy and surgery; and Vicq d'Azyr (1748–1794), known equally well for his labors in the department of anatomy, especially of the brain, nervous system, and vocal organs. Bichat (already mentioned) would deserve to be placed at the head of French anatomists were it not for his superior rank in clinical medicine.

The founder of pathological anatomy as a science was Morgagni, born in 1682 in Forli, Italy, a pupil of Valsalva, and at the age of nineteen the assistant of the latter. It was not until his seventy-ninth year, after he had published several works, that he allowed his

famous work on pathological anatomy to appear.—This is the historical classic, "*De Sedibus et Causis Morborum*," published in Venice in 1761. Its famous author did not cease work even when he became blind, and to him we owe the maxim that observations should be "weighed, not counted." He was very versatile and well informed in all branches of science and literature, and possessed a remarkable memory; likewise was the first to devote attention extensively and thoroughly to the anatomical products of common diseases, since before his time little had been regarded but rare discoveries in the body. He also called attention to the important bearing which the history of the disease has toward its products, and found his discoveries of advantage even when they were unable to promote the cure of disease, because of the light which they threw upon physiology and normal anatomy, and because they prevented incurable patients from being continually tormented with drugs intended to cure them; also because pathological investigations alone could settle disputes in diagnosis and matters of honor among physicians. He died in 1772.

Morgagni's legitimate successors in Great Britain were Baillie (1761–1823), a son of John Hunter's sister, and Sir Everard Home, Hunter's brother-in-law, who became professor in the Royal College of Surgeons, and was entrusted by Hunter with the work of describing his collection. Home, however, in most discreditable way burned several volumes of Hunter's own descriptions in order to appropriate to himself the sole credit of the work. He has gone down to fame especially because of his book on the prostate.

One of the most notable events in the history of medicine was the introduction of the systematic practice of *Preventive Inoculation against Smallpox*. It is so generally taught that this is entirely due to the efforts of Jenner—or rather, we are so often allowed to think it without being taught otherwise—that the measure deserves a historical sketch. The communication of the natural disease to the healthy in order to afford protection—or, in other words, the communication of smallpox to prevent the same—reaches back into antiquity. It is mentioned in the Sanscrit Vedas as performed by Brahmins, who employed pus procured from smallpox vesicles a year before. They rubbed the place selected for operation until the skin was red, then scratched with a sharp instrument, and laid upon it cotton soaked in the variolous pus, moistened with water from the sacred Ganges. Along with this measure they insisted upon careful hygienic regulations, to which in large measure their good results were due. Among the Chinese was practiced what was known as "pock-sowing," and ten centuries before Christ the Celestials introduced into the nasal cavities of young children pledgets of cotton saturated with variolous pus. The Arabians inoculated with needles, and so did the Circassians, while in North Africa incisions were made between the fingers, and among some of the negroes inoculation was performed in or upon the nose In Constantinople, under the Greeks, the custom had long been naturalized, and was practiced by old women instructed in the art, who regarded it as a revelation of Saint Mary. The first accounts of this practice were given to the Royal Society by Timoni, a physician of Constantinople, in 1714. The actual introduction of the practice into the West, however, was due to Lady Mary Wortley Montagu, who died in 1762, and who was wife of the English ambassador to the Porte in 1717. She had her son inoculated in Constantinople by Maitland, and on her return to London, in 1721, her daughter also was inoculated. During the same years experiments were undertaken by Maitland upon criminals, and, as these turned out favorably, the Prince of Wales and his sisters were inoculated by Mead. The practice was then more or less speedily adopted on this side of the Atlantic, but suffered occasional severe blows because of unfortunate cases here and there, such as never can be avoided. The clergy, especially, using the Scripture as designing men can always do, became warm opponents of the practice, and stigmatized it as an atrocious invasion of the divine prerogative. Nevertheless, in 1746 the Bishop of Worcester recommended it from the pulpit, established houses for inoculation, and thus made it again popular. In Germany it was generally favored, and a little later came into vogue in France and Italy. In 1757 Robert Sutton, near London, professed to

have made 15,000 inoculations without a single fatal case; he kept his patients on strict diet for nine days, then inoculated with the smallest possible quantity of virus. The operation was not prohibited in England until 1840, although it involved much greater dangers than vaccination with cowpox.

The first inoculation with cowpox seems to have been performed in 1774 by a farmer of Gloucester, named Jesty, though the pioneer in the extensive and general introduction of this method was Edward Jenner (1749–1823), of Berkeley in Gloucestershire, who therefore is generally known as the "Father of Vaccination." The son of a clergyman, he began early the study of medicine and surgery, and during his apprenticeship received from a milkmaid information of the protective power of cowpox against variola, as established by popular observation. (Sutton and others had proved that inoculation with *sheep*-pox was not efficient.) This communication so struck Jenner as a means of affording protection to the whole human race, that the subject never after left his mind. In 1770 he became a pupil of John Hunter, and when he communicated to him this idea the great surgeon said: "Do not think; investigate." Accordingly he went to Berkeley and performed the little operation which has made him famous; and from 1778 until 1788 he communicated to Sir Everard Home such observations as he had made. But his first vaccination was performed in 1796, upon a boy, with matter from the hand of a maid who had contracted cowpox in milking. In 1798 he published his memorable work, and afterward removed to London. He died full of fame and honor, in his native place, having received rewards from the government amounting to $150,000, besides being an honorary citizen of the City of London. The subsequent widespread practice of the method, and the formation of societies for the promotion of vaccination, are matters of recent history.

The first vaccinations in the United States were performed by Doctor Waterhouse, professor of medicine in Harvard College, in 1800, upon four of his own children. The transmission of humanized virus through the system of the cow, and its subsequent employment in vaccination of human beings, was first practiced by Troja (1747–1827), of Naples, shortly after the introduction of human vaccination; but in 1810 this was prohibited in Italy. Compulsory vaccination was first extensively introduced in Germany in 1807; in England it was first legalized in 1827. The occasional temporary character of the protection thus afforded was first taught by Elsässer in 1814. Schoenlein was the first to call attention to the distinction between variola and varioloid.

Another matter in which the eighteenth century witnessed great reform was the *Treatment of the Insane*, which continued in very bad condition until toward the close of the century, when a movement for improvement began. From and after this, lunatics were liberated from their fetters and from the hands of brutal keepers, and regarded as actually ill, while so-called schools of psychiatry were founded. While the first impulse in this direction was given by Lorry, the true reformer was Pinel, already mentioned, who did away with corporeal punishment and abuse, separated the insane from convicts, limited the employment of drugs and especially of venesection, placed the unfortunates in special institutions under the charge of physicians, and classified patients according to their symptoms. Yet, in spite of his humane teachings, lunatics were found incarcerated in cages in some of the French cities as late as 1834. Pinel was followed by Esquirol (1772–1840), who in 1818 established the first clinic for mental diseases.

It is well known what a conspicuous part *Public Baths* played in the social life of the ancient Greeks and Romans, but the first public resort for sea-bathing was established in Germany in 1794. The cold-water epoch of this century, however, began with the researches of Hahn (1696–1773), a Silesian who introduced a systematic and almost exclusive hydrotherapeutic method. The modern method of using cold water as an antipyretic agent was first employed in England, in 1797, by Currie, who originally was an American merchant. In France the method found little sympathy, but it made its way even to Spain later, where it was adopted by the famous Sangrado, who is well known to readers of "Gil Blas."

(To be continued.)

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., APRIL 25th, 1895.

Editorial.

GLASS HOUSES.

Unless we are greatly in error, the definition of quackery includes the perverting, distorting and strangling of legitimate medicine, for personal ends. Is it not notorious that there are a number of superficial observers and ready writers who are guilty of this very fault, in that they are ever ready to give evidence in favor of any preparation the contents and composition of which are concealed by trademark or patent, and of whose therapeutic and physiological action they are necessarily utterly ignorant—and that, too, in every conceivable form of disease or injury, regardless of rhyme or reason? If this is true, it is not only most reprehensible, but constitutes most dangerous charlatanism.

The greatest of all nuisances are, perhaps, the claiming of new and absurd properties in remedies, and making of each and every one a panacea. Just recall the history of Glycerin, which came into use half a century since, and regarding the merits of which the medical press was crammed to overflowing. From every part of the country, in every number of every journal, for nearly a year, were reiterated the wonderful uses to which Glycerin could be put, both as an internal medicament and as an external application; and it is no exaggeration to say it was recommended for nine-tenths of the diseases in the nosology regardless of ætiology or pathology. Its "soothing and anodyne properties as an eye-wash, devoid of all irritation," were vouched for by scores and scores; in phthisis it was found to be "a most excellent succedaneum for cod-liver oil;" in intestinal fluxes it combined all the advantages of a tonic, an astringent, an alterative, and a cathartic; by its external application all forms of skin disease were guaranteed to disappear as by magic—indeed, by giving credence to half of what was published regarding this drug, one could arrive at no conclusion save that the entire materia medica, excepting Glycerin, could now be dispensed with; and notably, amongst all this flood of positive evidence, not one word of negative ever found its way into print.

That very valuable remedy, Iron Perchloride, ran the same gauntlet, came very near being swamped, and to-day requires a long chapter of negatives to restore it to its proper place and estimation.

As an instance of the confusion to which positive evidence may lead, the experience of a practitioner who was appointed chairman of a committee to report to his State Medical Society on the action of Quinine, may be cited:

> I soon found it impossible. I became satisfied that I could produce good authority to prove Quinine possessed of almost every power attributed to each of the common classes of medicine, and also to prove it a specific—or next thing thereto—not alone in every disease of the nosology, but in every stage of every disease. There was no conflicting evidence—all was of the most positive type. I therefore began to study what Quinine would not do, but here could get no assistance; and my own experiences and observations were so limited that I did not deem them worthy of presentation.

Many of our readers will doubtless recall the fact that some years ago a physician in good standing (at all events he subsequently died in the odor of medical sanctity) reported in an Eastern metropolitan journal that in Lupulin he had discovered a positive specific for delirium tremens; he gave it in large doses—very large—in one instance as high as *six pounds;* and in spite of the fact that the ingestion of six pounds of Lupulin would cause any ordinary mortal to imagine himself stuffed with a bag of bran, this extraordinary statement attracted little attention. One gentleman, however, addressed the reporter for further information, but received no reply. He next wrote an open letter to the journal, which forced the desired information. The discoverer of the

wonderful remedy had not employed Lupulin directly, but a *tincture* made with *six pounds of the drug in six pints of strong brandy;* there was no suggestion of change of dose, and the only conclusion permitted the reader was that the patient had ingested at a single draught the entire three quarts of *eau de vie* —an amount which might be by some considered excessive, even in these days.

Another bit of evidence of the same class was offered by one who assured the profession that he never failed in cutting short or aborting an attack of gonorrhœa within forty-eight hours by the administration every two hours of twelve grains of solid extract of Conium. This statement was never queried, not even by the editor of the journal in which it appeared. It can be imagined "the burying of mistakes six feet under ground," to use the words of a witty attorney, must have saved an incalculable amount of trouble. Possibly a typographical error converted the fraction 1-12 or 1-2 into 12. This is the most merciful explanation we can guess at, though we must confess it is a little far-fetched in view of the writer's subsequent silence. The editor of THE MEDICAL AGE has personally given as high as one-eighth of a grain of Conium every two hours for several days in succession, yet no appreciable effect upon the genito-urinary apparatus could ever be discovered.

Another and a kindred remedy, Gelsemium, had its term of laudation in the same malady and in enormous doses, and yet the only instance that we can record wherein it was of benefit was a complication of intermittent fever—with the cessation of the latter there was complete relief from the urethritis.

To declare that a remedy is equally good for everything is a very practical assurance of its utter worthlessness. Incalculable damage is the result—far more than if not a line had been written, since in the latter instance honest research would be stimulated. Indeed, most of the items concerning the varied powers of a remedy are published after only one successful case, and those who write thereof are in the main incapable of distinguishing between physiological phenomenon and *vis medicatrix naturæ*. It is an anxiety to appear in print and to secure self-advertising that induces the adoption of the too ready rule of *post hoc ergo propter hoc;* and the fact is entirely lost sight of that charlatanism is doubly vile when practiced by a member of the legitimate medical profession, and that much of the odium attaching to the profession is due to this very cause alone. The complaints justly made regarding the exploiting of Glycerin, Iron Perchloride, *et al.*, are to-day applicable to almost every article of our materia medica, and especially to the synthetics that during the last decade have multiplied to a dangerous degree. The fashion of reporting cases before they are fairly convalescent has become a notorious nuisance, and the disciplining power of national, state and county medical societies should be brought to bear to prevent, or at least to express marked dissatisfaction with, such manufacturing of literature.

Is it not likewise a marked case of "glass house" when the medical press continues to bemoan the fact that clergymen permit their names to be employed in the puffing and marketing of patent medicines? How many medical journals to-day can be found that do not open their columns to the puffing of proprietary and patent medicines at the hands of the very individuals who are so quick to condemn the clergy, or that do not prostitute their editorial columns to the dissemination of rank falsehoods? Surely the errors committed in the interests of legitimate therapeutics are sufficient. What is the "reading notice" but rank deceit? If it were not a deceit, the exploiters of proprietary nostrums would not require it. These reading notices are sent in with the expectation that when printed they shall be accepted by the readers as editorial utterances.

Would it not be well, then, to purge ourselves of the medical *beam* before condemning the clerical *mote?* It is said medical men are rapidly losing caste. Certainly the dignity of the profession is endangered by prostituting a noble calling and dragging it to a level so low that both honor and truth are ignored.

HOANG NAN.

This drug, known as "tropical bind-weed," and which grows on the mountains between Anam and Tonquin, is generally in use in Cochin China for leprosy. That it belongs

to the strychnine group is evidenced by the fact it yields this alkaloid, as well as brucine. Doctor Etienne reports that, given to twenty-four lepers, "it caused general improvement in all but one—the remedy works also simultaneously upon all manifestations of disease without exception; upon muscular paralysis it seems to produce the least effect." Moreover, treatment extending over a period of two years did not in the least tire the stomach or injure the general health. Doctor Gilbot, in the Danish West Indies, reports a case of leprosy in which "the ulcers yielded rapidly to treatment, becoming cicatrized." In India, fifteen lepers were treated by Desaint and Joboard, who concluded "Hoang Nan is an active remedy, destined to be of great service, not alone in leprosy but in the management of all indolent ulcers." Feron, of Poncherry, treated not only leprosy but scrofula, with good results, and found the drug "especially valuable in the management of ulcers." Fiot, of Tonquin, reported like success. Lesserteur believes Hoang Nan will be found equally "efficacious in leprous ulcerations and syphilitic trouble;" epilepsy, prurigo and convulsions are also relieved. When pushed to toxicity the drug induces tonic convulsions that begin always in the lower extremities of man, the posterior extremities of quadrupeds, gradually extending over the whole body until they become general. It must therefore be classed as a strong cerebro-spinant. Desaint declares that in leprosy it produces "extraordinary improvement;" that "in two months anæsthesia disappears and sensibility is once more restored, the patient becoming more active and joyous. The complexion peculiar to the disease disappears and a rosy hue takes its place."

With all this positive information, it certainly would seem as if the drug were worthy more extensive study than has hitherto been accorded.

RISKS IN WEARING ARTIFICIAL EYES.

Professor Panas, of London, justly enters a protest against the abuse of eye-enucleation frequently met with both in hospital and general practice. The deformity so caused is most prejudicial to the interests of the patient; and further, the operation often provokes the very disease against which it is practiced—viz., sympathetic ophthalmia—which is infinitely less common than generally represented. As a matter of fact, the wearer of a glass eye runs great risks of inducing sympathetic trouble in the healthy eye from neglect of cleanliness in the artificial organ, since from such causes the orbit becomes filled with pus, ulcers develop, and cicatricial bands form. Again, the artificial eye may be fractured or roughened; and, having only one, the patient continues to wear it although it is a source of continual irritation. Many wearers of artificial eyes present eversion of the lower lid; in others entropion and trichiasis are observed. To avoid these inconveniences it is desirable the patient be supplied with two artificial eyes. At night the eye should be placed in an aseptic fluid, and, to obviate difficulty in its introduction into the orbit, a lubricant of like character should be employed.

The best means of preventing the formation of cicatricial bands is the complete suture of the conjunctiva at the time of the operation of enucleation: When bands have formed, autoplasty should be performed, the flap being taken from the neighborhood of the eye and not from a distant part of the body (heteroplasty).

SUGGESTIVE.

A committee appointed to investigate the management of the Chelsea Hospital for Women, London, say:

"With regard to exploratory operations, we have observed that in five of eight cases no disease is found and no organ sufficiently diseased to demand removal. Circumstances such as these render recourse to this method of diagnosis unjustifiable."

EDITORIAL NOTES.

Adulteration of Spices and Condiments.—

A recent bulletin of the United States Department of Agriculture gives an idea of the extent to which spice mixtures have gone in the way of sophistication:

Allspice is adulterated with spent cloves, clove stems, cracker dust, ground shells or charcoal, mineral color, yellow corn: *Red*

pepper with rice flour, yellow corn, salt and ship stuff, turmeric, and mineral red: *Cassia* with ground shells and crackers, turmeric, minerals: *Cinnamon* with cassia, peas, starch, mustard hulls, turmeric, minerals, cracker dust, burnt shells, or charcoal: *Cloves* with "spent cloves," clove stems, minerals, allspice, ground cocoanut-shell, roasted pea-nut shells, wheat flour, peas: *Ginger* with cereals, turmeric, mustard hulls, cayenne, peas: *Mace* with cereals or starch, buckwheat, wild mace: *Nutmegs* with cereals or starch, wild nutmeg: *Pepper* with refuse of all sorts—pepper dust, ground crackers or ship stuff, rice, mustard hulls, charcoal, cocoanut shells, cayenne, beans, peas, bran, maize: *Mustard* with starch, turmeric, peas, beans, corn meal, ginger, and gypsum.

Something New in Monkeys.—

Doctor MacGowan, a missionary physician in China, has for some time displayed the distinguishing characteristic of a modern Munchausen. He has told some very stiff tales, and, being stimulated by the notoriety achieved, has now capped the climax by declaring there is a race of monkeys inhabiting the mountain region of Chegiang, China, that have made extraordinary progress in the art of making wine. A number of these quadrumana were frightened during their migration from one mountain to another, and dropped in their flight earthen vessels, some of which would hold a quart; and in these were fouud two kinds of wine, respectively of pink and green hues, that had been made from mountain berries. He affirms this species of our four-handed cousins store this liquor for winter use when the water is all frozen.

Next!

Malignant Diseases in Animals.—

It is reported that cancer has been detected in American brook-trout that are confined in ponds of New Zealand with a view of acclimatization. It is doubtful, however, if the disease is, strictly speaking, cancer, though it is probably malignant and closely allied to the salmon disease of Scotland and the trout fungus that affects the larger salmonoids of the Great Lakes. Many animals are prone to sarcoma, chiefly quadrupeds and quadrumana.

Electrical Execution.—

In the case of the negro murderer, David Hampton, who was executed by electricity at Sing Sing prison on January 28th, the autopsy showed considerable ruptures of the cerebral arteries as a result of the current. Any attempt at resuscitation, in this instance at least, would therefore have proved fruitless.—*Times and Register.*

This would seem to most satisfactorily dispose of the charge that has been going the rounds of the lay press to the effect "electrocution," so called, only induces suspended animation, and that death results from the post-mortem knife.

Chloral in Typhoid.—

Doctor W. L. Dunn, in the *Virginia Medical Monthly*, expresses the opinion that Chloral hydrate shortens and renders lighter the attacks of typhoid.

The editor of THE MEDICAL AGE can corroborate the foregoing, and add moreover the certainty that when this drug is employed the danger from intestinal hæmorrhage is greatly lessened.

Medicine in Upper Scandinavia.—

In Sweden ten years of study is incumbent on every medical student. The demand that all practitioners shall be fully qualified is so closely observed that the practice of homœopathy is forbidden, and no globule of homœopathic medicine can enter the country except surreptitiously.

A Delayed Credit.—

In the issue of March 11th we had occasion to review "Diseases of the Ear," by Doctor Buck. By some inadvertence no mention was made of the publishers, who are Messrs. William Wood & Co., of New York City.

The Plague.—

This scourge, which apparently had disappeared in China, to be replaced by cholera, has again broken out, and most virulently at Amoy.

Tænia in a Young Infant.—

Doctor W. M. Guice, in the *Medical World*, reports finding tapeworm in a child but eighteen months old.

Items and News.

An All-Round Doctor.—

There is an original doctor located on one of the islands in Puget Sound. He advertises in posters and placards printed on a home outfit, and in one of his announcements says:

"Legs and arms sawed off while you wate without pane:"

"Childbirth and tumors a specialty:"

"No odds asked in measles, hooping coff, mumps, or diarrear:"

"Bald-head, bunions, corns, warts, cancer and ingrowing tow-nales treated scientifically:"

"Coleck, cramps, costiveness and worms nailed on sight:"

"Wring-worms, pole evil, shingles, moles, and cross eye cured in one treatment or no pay."

"P. S. Terms: Cash invariably in advance. No cure no pay."

"N. B. (Take Notis) No coroner never yet sot on the remanes of my customers, and enny one hiring me doan't hafto be layin up money to buy a gravestone. Come one come awl."—*Stillwater Gazette.*

Failure of Haffkinism.—

THE MEDICAL AGE says: "We have before remarked in these columns upon the humbuggery of Haffkinism, and the fact that converts thereto are chiefly outside the pale of the medical profession; also that it is passing strange Haffkin found it necessary to make the long journey from the shores of the German Ocean to Southern Hindostan in the interest of science and suffering humanity when the same objects could be much more readily attained in Europe where the expectation of the recrudescence of the disease has been fulfilled."

Another remarkable fact is that although cholera is constantly endemic to certain portions of India, Haffkin carefully avoids these, preferring to experiment only in districts where the test of his theory will be far from crucial.—*Indian Medico-Chirurgical Review.*

[Another Indian medical journal states: "Seventy per cent. of the men in a British regiment inoculated by Haffkin, to protect them from cholera, died from that disease."—ED.]

A Case of Malpractice.—

Doctor Farnsworth, of Clinton, Ia., reports the following case in the *Medical and Surgical Reporter:* The Spitz dog of a highly respectable family of this city had a difficulty with his throat. Respiration impeded; deglutition difficult. The carriage was ordered out and "Tip" taken to a leading surgeon. The latter diagnosed stenosis or tumor of the larynx in the neighborhood of the vocal cords; examination confirmed this diagnosis. Under chloroform an operation was performed, but the dog died. A post-mortem examination revealed the fact that some one had slipped over his head a rubber band such as druggists use to tie up packages, and it had worked through the hair and imbedded itself in the skin. In any case it was the cause of the dog's death, and the bereaved are now querying where to fix the blame.

Skunk Oil.—

An Iowa correspondent of an exchange gives the following information concerning the origin of skunk oil: "Skunk oil is commonly sold in the drug stores around us as a remedy for rheumatism. Skunks hybernate during the winter, never appearing above ground excepting on very fine days. Before retiring underground, they become well loaded with fat. When killed by drowning them—filling up their holes with water—they are dug out without producing any offensive odor. The 'stink-bag' is removed, the skin secured, and then the fat taken out and treated just as in making lard. The preparation of skunk oil is a profitable industry during the winter months. A German family living at Esterville, Iowa, do a considerable business in its preparation every year."—*Scientific American.*

Large Oysters.—

Pliny mentions that according to the historians of Alexander's expedition, oysters a foot in diameter were found in the Indian seas; and Sir James E. Tennent was unexpectedly enabled to corroborate the correctness of the statement, for at Kottiar, near Trincomalee (Ceylon), enormous specimens of edible oysters were found. One measured more than eleven inches in length by half as many in width. But this extraordinary measurement is beaten by the oysters of Port Lincoln in South Australia; they are as large as a dinner plate and of much the same shape, sometimes more than a foot across the shell, and the oyster fits his habitation so well that he does not leave much margin.—*Exchange.*

Mal de Mer.—

A correspondent sends the following story, for the truth of which he vouches, concerning a man and woman who were horribly sea-sick crossing the English Channel. The stewardess found them sitting together on the deck, the woman leaning back with closed

eyes, and the man's head resting on her shoulder. "Your husband seems to feel even worse than you do," said the stewardess, sympathetically. The sick woman opened her eyes and glanced at her fellow sufferer with a sort of despairing indifference. Then she gasped as she closed her eyes wearily again, "He's not my husband; I'm sure I don't know who he is."—*Sanitarian.*

Therapeutic Fallacies.—

A writer in the *American Journal of Pharmacy* points out the fallacy of the oft-repeated statement that lithic urate is more soluble than any of the urate salts, and therefore lithia water is suitable to gouty patients and others who suffer from a superabundance of lithic acid; also the erroneous assumption that the exhibiting of chlorate of potash in blood-poisoning will oxydize and destroy the poison in the blood. The fact is, as any chemist knows, that in an alkaline solution like the blood, chlorate of potash is practically stable and consequently inert.

Castration for Enlarged Prostate.—

Doctor W. T. Belfield, of Chicago, warns against this operation, because the analogy between uterine myoma and prostatic enlargement omits the element in the latter of inflammation which clinically plays so important a part; and castration will not produce atrophy of this gland if it is interstitially hypertrophied from inflammation. Then, again, he says, in too many of these cases the cystitis is due to vesical calculi, cancer, papilloma, and tuberculosis, in which the enlarged prostate is but a symptom.

Competition in Medicine.—

Physicians in the future must expect hard times if the new doctors are to furnish any competition. It is estimated that there are nearly twenty-five thousand medical students at the present time. How are eight thousand physicians a year to be absorbed in the ranks of successful practitioners? Yet new medical colleges continue to be called for by philanthropic physicians anxious to do something for posterity. Posterity would often be better for being let alone.—*Physician and Surgeon.*

Mark This!—

Surgery is vastly overdone of late; . . . the modern shifting notions on pathology are largely responsible for the present state of things; the ever-haunting phantom of infection from simple lesions has led to the conclusion that local and radical measures are called for in the treatment of conditions which in the usual order are remediable through simple means with the aid of systemic therapy.—*Times and Register.*

Anxious.—

A letter was received by the principal of the —— school the other day. It is from an anxious parent whose daughter is a member of the class in physiology and is as follows:

"Dear Miss ——: I don't want you to learn my daughter any more about her insides. It ain't decent and it turns her against her vittles. Respectfully, ——."

"Track of the Wandering Jew."—

Cholera has appeared with considerable virulence in Southern Europe toward the Asiatic border. At Constantinople many cases, with nearly fifty per cent. of deaths, are reported. Even worse conditions are reported from China, particularly at the seat of war.

The Buffalo Medical and Surgical Journal.—

Our esteemed contemporary will be fifty years old in a few weeks, and its editor proposes to signalize its semi-centennial by increasing its reading pages and making other improvements that will keep it abreast of the progress of the period.

Suggestive Employment.—

The advertising pages of an exchange contain the following:

"A translation of the diploma of —— Medical College will be forwarded on receipt of a two-cent postage stamp by Dr. ——."

Unmistakably True.—

Many medical-journal articles of real value are so offensively scientific and correct and so full of technicalities and pedantic impertinences that it is a punishment to read them.—*American Lancet.*

A Good Collector.—

A midwife in western North Carolina is said to have confiscated a new-born babe because her fee was not paid. She was frightened into returning it.—*Medical Fortnightly.*

Death-Rate in the French Army.—

This is said to be 107 yearly to every ten thousand men. And during the Franco-German war the French loss from smallpox was 23,500.

A Definition of Influenza.—

A clergyman defines *la grippe* as "A 'cold' possessed of the devil."

Book Reviews.

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards Docker Company, Philadelphia.

The April issue is by far the most interesting of the year, and articles of especial interest are: "Observations on a So-called Petrified Man"—which, however, refers to a negro woman,—by J. M. Stedman; and "On the Presence of Fluorine as a Test for Fossilization of Animal Bones," by Thos. Wilson. "Experimental Evolution amongst Plants," and "On the Validity of the Genus Margaritana," are respectively by L. H. Bailey and Chas. T. Simson. There are also the usual "Editor's Table," "Reviews," and various departments devoted to progress in "Geography and Travel," "Geology and Palæontology," "Botany," "Entomology," "Embryology," "Psychology," "Archæology and Ethnology," "Microscopy," and "Zoölogy"—the latter among other matters giving descriptions and illustrations of four hitherto unknown species of deep-water fishes. "Scientific News" and "Proceedings of Scientific Societies" receive full attention.

The scope of this periodical is such as to commend it to all who have the slightest taste for scientific matters; it embraces a complete monthly epitome of what transpires in the world of science.

LITTELL'S LIVING AGE. Price, 20 cents; $8.00 per year. Littell & Co., Boston.

The four March issues give 315 pages of the choicest periodical literature printed in the English language. "The Court of Ferrara in the Fifteenth Century" is translated from the Italian of the Conte Gandini, by Miss H. Zimmern; "Single Chamber Democrats," by R. Wallace, M.P.; "Erasmus and the Reformation," by J. C. Bailey; "The Evolution of Cities," by Elisee Reclus; "Rural Scotland in the First Half of the Last Century," by H. Grey Graham; "A Visit to Dashur," by Amy Strachey; "Mr. Balfour's Foundation of Belief," by Benjamin Kidd; "An Unpublished Page in Madagascar History," by Alice Zimmern. The concluding paper is on "The Crimea in 1854 and 1894," by General Sir Evelyn Wood, G.C.B., V.C. The fiction includes "Only Kitty," by L. B. Walford; "A Curious Lottery," by Rye Owen; "The Girl who Believed in the Saints," by L. Dougall; "Honnie, A Study of Irish Peasant Life;" and "Bringing Down the House." Each number contains the usual page of poetry.

POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

Professor M. Allen Starr opens the April number with an account of "Some Curiosities of Thinking;" Professor James Sully contributes the seventh of his Studies of Childhood, entitled "Later Progress in Language;" Reuben P. Halleck discusses "The Personal Equation in Human Truth;" "Communicated Insanity" is discussed by Charles W. Pilgrim, M.D.; Garrett P. Serviss continues his illustrated talks about the constellations with an account of "Virgo and Her Neighbors;" in "The Successor of the Railway" the extent to which the trolley road may compete with the steam line is shown by Appleton Morgan. An article describing "Some of the 'Outliers' among Birds" is contributed by Doctor R. W. Shufeldt; C. H. Henderson presents a stirring plea for "Manual Training;" "Animals that Live in Caves" are described by E. A. Martel; a timely article is "The Shad's Annual Pilgrimage," by A. H. Gouraud; the subject of the usual sketch and portrait is Professor Lardner Vanuxem. There are the usual "Editor's Table," "Literary Notices," etc.

NORTH AMERICAN REVIEW. Price, 50 cents; $4.00 per year. Edited by Lloyd Bryce. New York.

The April number presents to its readers a varied and interesting table of contents. In "A Last Tribute," ex-Speaker Reed criticises the workings of the late Fifty-third Congress; Admiral P. H. Colomb, of the Royal Navy, predicts "The Future of the Torpedo in War;" and I. Zangwill describes "The Position of Judaism." An important paper is furnished on "The Growing Greatness of the Pacific," by Lorrin A. Thurston. The Minister to Spain writes upon "The Outlook for Parliamentary Governments." The fourth installment of "Personal History of the Second Empire," by Albert D. Vandam, deals with "The Marriage of the Emperor." Other subjects discussed are: "Hypnotism and Justice," by H. Merriam Steele; "The Conditions of Gold Production," by F. A. Rickard; "A Word about the 'New Pulpit,'" by C. Ernest Smith; and "The Evolution of the Irish Farmer," by G. H. Bassett.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 per year. Donahoe Magazine Company, Boston.

The Easter *Donahoe's* leading article is in the form of a "Reminiscence," by Reverend John Talbot Smith. Michael J. Dwyer reviews "Foreign Critics of American Manners;" "A Kansas Lawyer" adduces strong

and telling arguments against what he terms the "roaring farce" of the prohibitory laws in Kansas; James Clarkson presents a masterly *résumé* of the great French academician Brunetiere's recent article on the bankruptcy of science in its competition with religion, with introductory comments on the writer's conclusions. A serial story entitled "From Love to Martyrdom" is begun by Laure Conan. "Ste. Anne de Beaupré in Winter" is an attractive sketch of America's Lourdes, by G. M. Ward. Other excellent features are: "History as Told in Coins;" "What is Minority Representation?" by Doctor Lawrence F. Flick. The several departments contain items of practical and timely matter.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

Contents of the April number: "The Art Spirit," by O. A. Howland, M.P.P.; "The Lost Colony of Roanoke," by E. Y. Wilson; "The Mysterious Spotley," by Bernard McEvoy; "Old Ben," by V. C. McGie; "Saxon or Slav"—England or Russia?—by Honorable David Mills; "Sunday Morning at the Church of the Holy Sepulchre in Jerusalem," by Thomas Conant; "One of the Few," by Kay Livingstone; "A Glimpse of Robert Barr," by C. Stan Allen; "Youthful Canada, and the Boys' Brigade," by J. Castell Hopkins; "A Summer Evening at the Village Post Office," by Professor Tadmor; "Rome Revisited," by C. R. W. Biggar. The poetry is by Arthur J. Stringer, Keppell Strange, A. M. Belding, Reginald Gourlay, and Herbert Crombie Howe. There are the usual "Gable Ends" and "Book Notices."

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 a year. Harry C. Jones, New York.

The principal papers of the April issue are: "Boyhood and Girlhood," by Hjalmar H. Boyesen; "An Art Village," by Gertrude Kasebier; "Poems in Paint," by Hillary Bell; "A Modern Standard of Feminine Beauty," by Alexander Black; "The Castles of Old England," by Charles Turner; "A Summer in Brittany," by Arthur Hoeber; "Stories of the Sea," by Hamblen Sears; "Primitive Portrait-Masks," by John D. Champlin. The many illustrations presented are from the pencils of such artists as E. B. Bird, Carlton T. Chapman, Gilbert Gaul, E. W. Kemble, Florence Mackubin, George Agnew Reid, T. Robert-Fleury, Trythall Rowe, and a score of lesser lights.

THE MONIST. Price, 50 cents; $2.00 a year. The Open Court Publishing Co., Chicago.

The contents of the April issue are: "The World's Parliament of Religions," by Honorable C. C. Bonney; "The World's Religious Parliament Extension," messages from Cardinal Gibbons, Archbishop Ireland, H. Dharmapála, Right Reverend Shaku Soyen, Reverend Zitsuzen Ashitsu, Bishop Benjamin W. Arnett, Reverend Joseph Cook, and Reverend George T. Candlin; "A Piece of Patchwork," by Professor C. Lloyd Morgan; "The Well-Springs of Reality," by E. Douglas Fawcett; "Music's Mother-Tone and Tonal Onomatopy." by C. Crozat Converse; "Bonnet's Theory of Evolution," by Professor C. O. Whitman; Editorial; Literary Correspondence; Book Reviews, etc.

OUTING. Price, 25 cents; $3.00 a year. Outing Co., New York.

Sportsmen will find many seasonal sketches in the April number. "A Tiger Hunt," by J. H. Porter; "A Mexican Bull-fight," by Philip W. Avirett; "Duck-shooting in a Crater," by H. D. Couzens; "Rigging and Sails," by Captain Kenealy; "How Greyhounds Hunt," by A. H. Powers; "Jacking for Pickerel," by E. W. Chubb; "Football Extravagance," by Walter Camp; "The Conversion of Trapper Lewis," by Ed. W. Sandys; "Spring Birds," by N. C. Brown,—all are prominent features. Excellent complete stories, travel sketches, and valuable illustrated, editorial and record departments complete an unusually attractive number.

THE CENTURY MAGAZINE. Price, 35 cents; $4.00 per year. The Century Company, New York.

The April number has almost as much variety in topic as in the number of its articles. Military warfare is represented by Professor Sloane's "Life of Napoleon Bonaparte;" naval warfare, by Molly Elliott Seawell's article on "Paul Jones;" invention, by T. C. Martin's paper on Tesla's recent work; the drama, by a note on Mme. Réjane; music, by Henry T. Finck's biographical sketch of Stavenhagen; statesmanship, by Noah Brooks's article on "Lincoln's Reëlection." There are also papers devoted to art, religious education, travel, and fiction, with the usual poetical effusions.

PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 per year. The Fowler & Wells Co., New York

The contents for April are: "The Honorable Thomas C. Platt," by Doctor Edgar C

Beall; "Education for Every Day," by Caroline B. Le Row; "Mysteries of To-day," by Anna Olcott Commelin; "William Walton," by Charlotte Fowler Wells; "Temperament and Faculty," by W. P. Underwood; "The Scientific Relation," by H. S. Drayton; "Some Characteristics of the Japanese," by L. N. Fowler; "Child Culture," by Nelson Sizer; "Science of Health;" "Notes in Anthropology;" Editorial, and Answers to Correspondents.

THE OVERLAND MONTHLY. Price, 25 cents; $3.00 per year. Overland Publishing Company, San Francisco.

In the April number, "Baboo's Pirates" is by Rounsevelle Wildman; Verner Z. Reed contributes "Lo-To-Kah and the Golden Woman;" "True Tales of the Old West" Series is by S. S. Boynton; Rabbi G. A. Danziger writes of "The Jew in San Francisco." There is the usual variety of poems, stories, and sketches, book reviews, editorials, and the entertaining "As Talked in the Sanctum."

MEDICAL GYNÆCOLOGY. By Alexander J. C. Skene. Cloth; 8vo; pp. 529. D. Appleton & Co., New York.

The value of this book is sufficiently evidenced by the name of the author. It is written perhaps more in the interests of the general practitioner than of the specialist, and deals more particularly with the *medical* side of gynæcology, wherein it differs from the majority of works. Part I deals with the differentiation of sex, development and growth during early life, etc., incidentally discussing heredity, environment, care of children, mental and physical education, culture and hygiene. Part II treats of the characteristics of sex, and follows up all the functional and organic diseases common to the period of active functional life. Part III discusses the menopause, or transition from functional life to old age, along with the diseases of the latter period.

This work fills a niche in medical literature hitherto unoccupied, and it cannot but be of value to all classes of medical men. We cordially recommend it, particularly for its plain, practical, hard-headed yet simple teachings.

THE MEDICAL ANNUAL AND PRACTITIONERS' INDEX. Cloth; 12mo; pp. 751. Price, 7*s.* 6*d.* John Wright & Co., Stone Bridge, Bristol, England.

This the thirteenth yearly issue of this publication is especially interesting. It is a very complete compendium of the advance of medical science during the year 1894, by a full corps of distinguished authors, among whom we note Gilbert Burling, Fancourt Barnes, William Elam, J. H. Fenwick, John Fitzgerald, Colcott Fox, Dundas Grant, Allan McLane Hamilton, W. Arburton Lane, Greville Macdonald, Hector Mackenzie, Joseph Priestly, Ramsay Smith, and Blair Stewart. Notably there is a very complete history of the antitoxin treatment of diphtheria, by Armand Ruffer; likewise a comprehensive *résumé* of the advance in surgical instruments and appliances.

It is impossible to give this book the review it deserves, since its scope is so large; yet it is of the utmost value to the practitioner in affording him at a glance information which otherwise could be obtained only through the perusal of many volumes and periodicals.

TWENTIETH-CENTURY PRACTICE OF MEDICINE. Edited by Thomas L. Stedman. Cloth; 8vo; pp. 739. Price, $5.00. William Wood & Co., New York.

The second volume opens with a treatise upon "Addison's Disease and other Diseases of the Adrenal Bodies," by Sir Dyce Duckworth. "Diabetes Mellitus" is by Carl von Norden; "Rheumatism," by T. J. Maclagan; "Gout," by Henry M. Lyman; "Arthritis Deformans," by Archibald G. Garrod; "Diseases of the Muscles," by Dujardin-Beaumetz; "Obesity," by M. J. Oertel.

We cannot commend too highly this volume, which also must be considered as evidence of the value of the volume to follow. All the authors of Volume II are noted specialists, only one of whom, however (Doctor Lyman), is a resident of the United States. They represent the special talent of Great Britain, France, Frankfort-on-the-Main, and Munich.

GENERAL MEDICINAL TECHNOLOGY. By Edward Curtis, A M., M.D. Cloth; 32mo; pp. 235. Price $1.00. William Wood & Co., New York.

This little manual has been so well received as to require a third edition. It deals with topics that find scant treatment in the usual text-books of the materia medica, and cannot fail to be of value to every practitioner.

DISEASES OF THE EAR. By Doctor A. Buck.

This work was reviewed in THE MEDICAL AGE for March 11th last, but by some unfortunate *contretemps* the name of the publishers, Messrs. Wm. Wood & Co., of New York, was omitted.

Therapeutic Brevities.

The Treatment of Obesity by Means of Thyroid Extract.—The rapid loss of body-weight attending the treatment of myxœdema with thyroid extract very naturally suggested the applicability of the same method of treatment to that *bête noire* of middle-aged men and the fair sex—obesity. Already Doctors Leichtenstern and Wendelstadt, of the Augusta Hospital, Cologne, have observed a manifest diminution of *embonpoint* in twenty-two of twenty-five obese subjects after a course of treatment with fresh sheep's-thyroid. The good effects observed are ascribed to more active combustion of the accumulated fat, rather than to the diuresis which is a marked feature of the initial stage of the treatment. It is said that the process is more rapid during the early part of the cure, the loss of weight diminishing gradually. The actual wasting observed varied in the different cases from two to ten pounds during the first week, and from two to seventeen pounds after several weeks' treatment. MM. Charrin and Roger have succeeded in procuring notable emaciation in animals subjected to subcutaneous injections of thyroid-juice in daily dose of from seven to ten grains. In Professor Bouchard's wards, M. Charrin gave an average of fifteen grains daily of thyroid-juice, both subcutaneously and by the stomach, to a woman affected with general adiposis with more pronounced accumulation of fat at the junction of the limbs with the trunk. In three months her body-weight fell from 295 to 249 pounds. The treatment was afterwards continued at intervals. During the periods of suspension of the treatment the weight remained stationary, but fell at the rate of one and a-half to five ounces per day when the extract was again administered. A maximum of emaciation appeared, however, to be reached in time. Analogous, although less marked, results were obtained in a second patient, whilst a third remained unaffected; a like disappointment was noted in several other instances. M. Charrin ascribes the inconstancy of results to the different natures of the obesity, to insufficiency of treatment, and in certain instances to the bad quality of the substance employed. It is only right to add that the patients experimented on were one and all women, and all free from symptoms of myxœdema.—*The Lancet* (London).

Conservative Therapeutics.—I use the term conservative as a plea against the wave of therapeutic fadism and changeability that seems to be sweeping over the medical profession in this country. The riding to death of a new hobby to-day, and to-morrow turning it out to graze, completely worn out, only to repeat the process with another just as worthless, is disgusting to the better element of the profession, to say nothing of the public. It does seem truly strange that so noble a profession should practice such things.

While this, perhaps, is not true of the majority, there is a large number who, in their efforts to attract attention, resort to the methods of quacks. They like to be able to tell that they have the "latest treatment" for this or that, forgetting that the very fact of their always getting something new is evidence of the insufficiency of what they used before. Continual change is the best proof of ignorance and dissatisfaction. "We believe in progress," is the cry of this class of medical men; but does it not seem that repeated failures would teach that haphazard guesswork is neither scientific or productive of good? There is quite a difference between jumping at conclusions and establishing a fact.

Neither is the general practitioner to undertake to establish facts by subjecting his patients to senseless experiments with new and untried remedies, even though the latter are highly praised. Experiments and discoveries of new cures (*sic*) and new methods of treatment should be left to those fitted for the work and in a position to make tests without doing injustice to a trusting invalid. The highest duty of the physician is to his patient, with whom he should deal in all honesty and candor, employing remedies that have received definite endorsement.—To do other than this is to be guilty of a breach of faith and borders on actual criminality. The high-minded practitioner should cease riding hobbies and simply practice medicine, "proving all things, and holding fast to that which is good."—Doctor C. C. Collins, in *Cincinnati Lancet-Clinic.*

Foreign Bodies in Anus.—A point frequently overlooked is the effect of foreign bodies in the anus, in relation to pruritus, fissure, erosion and intertrigo. It is well known that animal parasites lead to irritation and finally to erosion, and that the pruritus thus caused is made use of to establish a diagnosis, but very seldom is the cause of intolerable symptoms looked for in the presence of too long hairs about the anus. In hard and frequent evacuations, the lower part of the rectum is pushed out and the anal ring remains open for a few seconds. These long hairs are pressed against

the mucous membrane and remain imbedded in the folds. The sphincter, regaining shortly its normal position, presses and pulls the hairs, and the muco-rectal irritation gives rise to the sensation of tenesmus. The hairs become incarcerated, friction leads to increased irritation, and prolonged irritation to intertrigo and erosion.

A farmer complained a long time of itching and soreness in the anus. Inspection revealed very long hairs, a few of which had become incarcerated; on their complete removal and a few applications of carbolized vaselin, the sore sensation and tenesmus ceased.

Often too little attention is paid to the indigestible portions of food, such as the shell of sweet corn, the seeds of grapes, berries, etc., which are easily caught in the anus and act as foreign bodies, particularly when incarcerated in the folds of the anal ring. They thus become the cause of paraproctitis and rectal fistula. In one case, apparent paraproctitis was found to result from a splinter of wood—the result of chewing toothpicks; another from a fish-bone in same locality. A case of supposed hæmorrhoids proved to be a fissure in the direction of the perineum in which was imbedded the seed of an orange. A suffering infant owed its troubles to tomato-seeds, the result of feeding upon this fruit the day before.

By examining the rectum, especially in children, many cases of troublesome tenesmus will be found to depend on such simple causes as the above.—Doctor Fest, in *The Practitioner.*

Belladonna.—Belladonna is frequently of use in the diseases of children, and particularly valuable in disorders of the respiratory apparatus accompanied by excessive secretion or by spasmodic action, from coryza with repeated sneezing to spasmodic bronchitis and whooping-cough. In coryza with abundant discharge and difficulty of respiration on account of obstruction of the nasal fossæ, this drug is especially advantageous to promote dryness of the pituitary membrane. Simple laryngitis due to cold, laryngismus stridulus, essential or symptomatic spasm of the glottis, are also favorably influenced. In a great many cases Belladonna produces manifest relief, acting both upon the laryngeal secretions and the nervous element which causes the spasm. Tracheo bronchitis and spasmodic bronchitis, whether dependent or not upon *la grippe*, are equally ameliorated by its employment. As much may be said in favor of its use in constitutional or symptomatic asthma, the asthma-like attacks of tracheo-bronchial adenopathy or of emphysema, and in paroxysms of dyspnœa. Although so beneficial in spasmodic affections of the upper respiratory passages, its use is to be deprecated in pulmonary maladies accompanied by prostration and tendency to collapse, as pneumonia, broncho-pneumonia, etc. Above all it is in whooping-cough that this remedy has been employed the most frequently and extensively. Its sedative and antispasmodic properties particularly distinguish it as suitable for use in a disease in which the spasmodic element overshadows all other manifestations; it is, therefore, universally employed in the spasmodic stage of pertussis. In order to obtain its beneficial effects, however, it should be pushed until it begins to produce its constitutional manifestations. Smaller doses do not succeed in allaying the spasmodic cough.—*Medical Bulletin.*

Cactus Grandiflorus.—The literature of this drug, though extensive, is somewhat vague, too many properties being ascribed to it, without authoritative evidence of a pharmacological or carefully carried-out therapeutical kind. Its chemistry is practically unknown, and no one as yet has been able to determine either a contained alkaloid or glucoside—only a series of resins. These resins, to be sure, contract the blood-vessels of frogs, but such is not a digitalis contraction and is due, I believe, to simple acidity: on the heart they have little or no effect, comparisons being made with digitalis on the same animal. There is no proof that Cactus shortens diastole, nor in fact that it has any special action on heart muscle.—I therefore conclude it cannot properly be included in our list of cardiac drugs, though it certainly has some slight diuretic action.—Doctor Groden Sharp, in *The Practitioner* (London).

[As most of the data on which the claims for Cactus Grandiflorus rest, also admit its combination with nux vomica, it is evident our knowledge of the former must in the future be derived from its administration *solus.*—Ed.].

Anent Infants.—Under six months the rectal temperature averages 98° F., the axillary temperature 98.3° F.; between six and twelve months, rectal temperature 98.6° F., axillary 98.3° F.; twelve to eighteen months, rectal 98.4° F., axillary 98.3° F.; from eighteen to thirty months, rectal 98.9° F., axillary 98.1° F.

These points are important as furnishing a basis for judging of departures from the temperature of health.

Mental excitement is capable of causing a rise of temperature of five or six degrees above normal. Sudden and unaccountable elevations of temperature, continuing for some hours, are often due to indigestion or constipation. A common observation is that a marked recession of temperature follows moving of bowels.

The pulse averages, under the age of six months, 125; from the sixth to the twelfth month, 124; twelfth to eighteenth, 115.5; from the eighteenth to the thirtieth, 111.8.

The average number of respirations under six months is 44.8; sixth to twelfth month, 34.8; twelfth to eighteenth, 35.4; eighteenth to thirtieth, 29.8.—Doctor J. L. Smith.

Horse Nettle (*Solanum Carolinense*).—The common Horse Nettle has been recently brought forward as an antispasmodic of value in convulsive affections such as chorea, puerperal eclampsia, etc, and especially in epilepsy. Many cases that have resisted all other remedies have been either cured or greatly benefited, we are told. Favorable results of the action of the drug have already appeared in several of the medical journals. During the past five months this new candidate for consideration has been given trial in eleven cases in the wards of the Alabama Insane Hospital, and the results are not encouraging. The drug seemed well borne in every instance, and there were no complications or unfavorable symptoms save that in four cases an increase in the convulsions was noted. Scarcely any line of treatment heretofore employed has given such uniformly unfavorable results as the Horse Nettle. It is possible that in the treatment of a less unfavorable class of patients the results might prove more encouraging.—Abstract of paper by Doctor E. D. Bondurant, in *Medical News*.

Chloral Hydrate.—If it were not for the unpleasant taste of this agent, there would be no need for many of the long list of hypnotics. During twenty years it has held its own, and deserves the position it occupies as a nerve sedative and sudorific. It is the remedy *par excellence* for wakefulness with excitability, exaggerated mental activity. It is especially desirable for children, but should be given in small doses and begun two or three hours before sleep is desired. It will prevent spasm in the young, or overcome a sharp convulsion, especially if of reflex origin, with as great certainty as any other known agent. It has powerful relaxing effects in large doses and may thus be used to relieve rigidity of the os uteri; and with this condition there is often that nervousness, general distress and wakefulness for which Chloral is specific. Thus quite a long train of symptoms will be relieved and perhaps convulsions averted by its use. It acts synergistically with the bromides and is sometimes given advantageously in conjunction with them, preferably the bromide of sodium.—*Exchange.*

Benzin Poisoning.—A healthy young woman, aged thirty, took by mistake a dessertspoonful of benzin, which Murrell states is an active narcotic poison. Ten minutes later she was collapsed and drowsy, but quite conscious when spoken to. An ordinary emetic was administered without effect, so one-tenth grain apomorphia was injected subcutaneously, and large quantities of tepid water taken, which induced copious vomiting, the ejected matter having a strong odor of benzin. She remained collapsed and drowsy with a very feeble pulse, for a considerable time, hence brandy and ammonia were given and a subcutaneous injection of atropine had a marked effect in making her brighter and more lifelike. No respiratory difficulty was observed. The poison appeared to act chiefly as a cardiac depressant and narcotic. She was kept from sleeping for two or three hours and the next day was convalescent.—Doctor James Hudson, in *New Zealand Medical Journal.*

Cannabis Indica.—Cannabis Indica is a valuable remedy in all forms of cephalalgia; it acts favorably even in the severe headache attending cerebral growths. In chronic uræmia, where opium is contra-indicated, it is especially serviceable. It is almost a specific for that continuous form of headache which begins in the morning and lasts all day, the pain being dull and diffuse, marked by occasional exacerbations—such, though rarely severe enough to interfere with occupation, nevertheless constitutes a source of constant annoyance. Here it is well to administer Cannabis Indica morning and evening, one-twelfth to one-half grain of the extract in pill form. If these doses are not sufficient, give one grain in the evening and one-half grain in the morning. In very obstinate cases the dose may be still further increased (the larger dose always being taken in the evening), until relief is afforded or toxic symptoms become manifest.—Doctor Mackenzie, in *La Semaine Médicale.*

Fluid Extract Fringe Tree.—*Chionanthus Virginica* serves an excellent purpose

aundice when there is no fixed obstruction —it induces most sure and satisfactory re- ults. Yellowness of the conjunctiva, with r without the same condition of the skin oming on more or less speedily, not of hronic character, will be quickly relieved. 'he more chronic condition will often be reatly benefited, but the results are not so ertain. Tenderness in the region of the ver is one of the direct indications for this emedy.—Also it is one of the surest reme- ies in chronic inflammation of liver, or the ritable liver of the dipsomaniac; has a de- ded influence over the glandular system; is ficacious in bilious fevers and obstinate in- rmittents, especially during convalescence erefrom. From three to thirty, and even xty, drops may be given as a dose.

Abortive Treatment of Cold.—

℞ Carbolic acid, 5 parts.
Ammonia, 5 parts.
Alcohol (90 per cent.), 10 parts.
Distilled water, 15 parts.

Pour ten drops on a bit of blotting-paper, and hale the fumes thereof for several seconds con- uously. Repeat every hour.

Another remedy is a "coryza snuff," as f lows:

℞ Cocaine muriate, 2 parts.
Menthol, 1 part.
Salol, 20 parts.
Boric acid, 60 parts.

The employment of either of the foregoing should be in connection with the internal administration, one minim every hour, of a mixture of equal parts tincture Belladonna ail tincture Aconite root [both preferably nde from the normal liquid.—Ed.].—*Jour- ne des Practiciens.*

Heart Tonics.—Von Ziemssen objects to h tinctures of digitalis and strophanthus on account of their unreliability, and says that both of them should be struck out of the Pharmacopœia. He uses digitalis only in nfusion or powder; and strophanthus, in the form of strophanthine, in the dose of $\frac{1}{64}$ grain twice a day. This is not cumulative in its action, and, although not so lasting in its effect as digitalis, is the most preferable sub- stitute.

Strychnine is, however, the best remedy to restore the heart's action during the com- pensating period of valvular insufficiency. When existing compensation is disturbed, it is also a valuable adjunct to digitalis.—*Münchener Medicinische Wochenschrift.*

Glaucoma and Scopolamine.—Scopolamine, introduced to the ophthalmic profession by Raehlmann, was said by him to be free from one of the objections to which other mydriatics are open, namely, a tendency to give rise to glaucoma. Walter now shows that Scopolamine deserves no especial distinction in this respect; in two cases its use caused prompt and severe attacks of glaucoma. The chief advantage now left to be claimed for it depends upon the alleged fact that while much more prompt than atropine, its effects pass off much more quickly—a matter of considerable importance when it is used in tests of the refraction.—*Annals d'Oculistique.*

Rectal Feeding.—This may be carried on by a mixture of two eggs, twenty grains pepsin, ten grains sodium chloride, and six ounces water. The mixture should be slightly warmed, thoroughly agitated, and then gently introduced by means of a syringe. To facilitate the entrance of the fluid into the intestines, it is well to put the patient with the hips much elevated above the head—either the knee-chest position or with two or three pillows resting beneath the hips.—*American Medical Compend.*

Boletus Laracis.—I wish to call attention to a remedy very little spoken of, namely, *Boletus laracis.* In malarious fevers of remittent type, especially when characterized by feeling of dullness and languor, bitter taste in mouth, yellow-coated tongue, restlessness, headache, with free perspiration at night, I find this drug of especial benefit when given every two hours. I give from two to four drops of tincture at a dose.—Doctor W. S. Gibson, in *Eclectic Medical Journal.*

For Lumbricoids.—Deray's favorite prescription for worms in children is:

℞ Santonin, 20 grains.
Podophyllin, 5 grains.
Sugar, 30 grains.

Divided into five powders, one to be given every four hours until the bowels are freely acted upon.

The dose of podophyllin may be varied according to the age of the child.—*Western Druggist.*

Chloral Hydrate for Scarlet Fever.—Doctor James C. Wilson declares that Chloral in doses of two or three grains in a teaspoonful of syrup, every three or four hours, exercises a powerful influence in this disease. Given

thus, it is in high degree diuretic, controls the nervous symptoms, is to some extent antiseptic, and tends to diminish blood pressure and lower the temperature. He has employed it for ten years with most satisfactory results. —*Philadelphia Polyclinic.*

Asthma.—At the moment of the attack, spray rapidly the back of the patient with Methyl chloride, from above downward and from below upward. The attack will cease in a few moments; if not, spray lightly the upper part of the chest. If the skin be delicate, as in women, cover the parts with a bit of fine gauze, and make the strength of the spray proportionate to the strength of the patient and the violence of the attack.—Doctor Tsakiris, in *Gazette des Hôpitaux.*

℞ Tincture of asafœtida, 3 drachms.
Tincture of lobelia, 1 drachm.
Tincture of gelsemium, 1 drachm.

Mix. Sig.: Let thirty drops be taken for a dose.

—*Georgia Eclectic Medical Journal.*

Catarrhal Affections.—An excellent cleansing and disinfecting solution for free use in the nasal cavities, by means of the douche or spray, is:

Boracic acid, 2 parts.
Borate of soda, 2 parts.
Chloride of sodium, 1 part.
Euthymol, 32 parts.
Camphor water, 96 parts.

—*Exchange.*

Vesical Irritability.—When due to excess of phosphates in urine, irritability of bladder is rapidly relieved and the constant desire to urinate controlled by:

Benzoic acid, 2 drachms.
Soda biborate, 90 grains.
Water, 7 ounces.

Dose, one to two drachms, as demanded.

—*Le Progrès Médical.*

Chronic Alcoholism.—

Saturated chlorine-water, 8 parts.
Decoction of marshmallow-root, 155 parts.
Simple syrup, 15 parts.

One teaspoonful every two or three hours.

This treatment is said to relieve all gastric troubles associated with chronic alcoholism, also to counteract the unquenchable thirst for spirits.

Dysentery.—Take morning and evening washing down with a mouthful of water, on drachm of powdered Cinnamon mixed with few drops of water to make into a ball.

This treatment is derived from the Pe sians and has been employed by me for th past two years. Thus some thirty cases hav been permanently relieved—some by one c two doses, the worst by six.—Surgeon Major S. T. Avetoon, in *The Lancet* (Lo don).

Pertussis.—

℞ Zinc sulphate, 4 grains.
Tincture belladonna, 48 minims.
Anise water, 2 ounces.

Twenty drops, every third hour, for a child o year old; thirty for a child three years old; te spoonful if five years old, and so on.

—*Indian Medical Record.*

Tartar on the Teeth.—Doctor Pierce high recommends trichloracetic acid, a wood spatula being moistened with the agent a rubbed against the encrusted teeth until t tartar is thoroughly dissolved. The oper tion must be carefully performed, howev as the acid is an energetic escharotic.—*Médecine Moderne.*

Indigestion.—Doctor Griffith recommen

℞ Oil cloves, 2 to 3 minims.
Dilute hydrochloric acid, 15 minims.
Tincture nux vomica, 20 minims.
Compound tincture cardamoms, 2 drachm

At one dose, three times daily, before meals.

—*Philadelphia Polyclinic.*

Digitalis in Pneumonia.—In large doses acute pneumonia, Doctor Reiner declar Digitalis is worthless. The effect on the pu and temperature is slight, and in view of dangerous nature the remedy is not wo the risk in its use.—*Revue de Therapeutiq*

Treatment of Hordeolum.—A solution fifteen grains of Boracic Acid to the ounce water, applied three times a day with a cam hair brush, is often very efficacious in abo ing "stye."—*Brooklyn Medical Journal.*

Nocturnal Enuresis.—The best remedy bed-wetting in children is Normal Liq Ergot.—*Kansas Medical Journal.*

Medical Progress.

On Total Extirpation of the Patella.—In the *Revue Médicale de la Suisse Romande*, Doctor E Kummer advocates the following:

Total extirpation of the patella can be performed without impairing the patient's gait or markedly interfering with movements of the knee-joint:

The operation is indicated in cases of tubercular osteitis of the patella, provided the articulation remains yet intact:

Extirpation can actually prevent the development of articular lesions and thus save the knee joint, provided the operation is reported to sufficiently early:

In cases of tubercular osteitis of the knee-cap, total removal of the bone offers better chances in regard to recovery than scraping out the morbid foci.

Doctor Kummer adduces an illustrative case—a girl of twenty-five, with primary tuberculosis of the right patella, but with a perfectly intact knee-joint—in which he made excision of the bone, with excellent results. When shown to the Société Médicale de Genève about two months after the operation, the patient was able to extend her right lower limb as under normal conditions; would kneel with perfect freedom, and without any pain or discomfort; could walk four or five hours daily without lameness or fatigue, or run up and down staircases with ease, etc. In short, the only inconvenience caused by the absence of the knee-cap consisted in a relatively weakened extension of the corresponding limb.

A similarly successful case of total removal of the patella is reported by Professor Kaufmann, in *Correspondenz Blatt für Schweizer Ärzte*. The patient, a married lady of thirty-three, was suffering from fungoid osteitis of the left knee-cap, of eight years' standing. A month after the operation she, being frightened by a fire next door, tore off all dressings and ran out of her house, having swiftly descended a staircase. Since then the knee-joint has been perfectly movable and her gait normal.

Doctor Kummer mentions further two cases of primary tubercular osteitis of the patella in boys, in which the whole of the bone was removed by Professor Th. Kocher, of Berne.

An interesting case of total excision of the patella for acute necrosis has also been published in the *Lancet* (London), by Mr. Page, of Newcastle-on-Tyne. The patient recovered with a perfectly useful limb.—*Provincial Medical Journal.*

Aspermatism.—Doctor Henry C. Sims, of Philadelphia, recently published a case of aspermatism which is of interest as constituting a rare variety of relative impotence, and from the sociological element involved. The patient was a strong, healthy Irishman, twenty-seven years of age, and a blacksmith by occupation. His genital organs are normally developed, testicles rather above the average in size. Erectile power is normal, and *libido sexualis* present but rather vague. When under the influence of sexual excitement he experiences no difficulty in *intromissio penis*, but has no orgasm. There is no discharge of seminal or other fluid before, during or after the act, although with the ensuing flaccidity comes a feeling of some satisfaction. He has very rarely lascivious dreams, and never pollutions. The urethra admits a full-sized sound, and shows a normal sensibility at the *pars prostatica*. There has never been any urinary difficulty, nor any deposit in the urine after coitus. As far as could be ascertained, the prostate and seminal vesicles are normal. Owing to the lack of pathological change, history of disease, or excessive venery, the case has been classed provisionally among those of psychical aspermatism, because it might perhaps be due to want of excitability of the reflex centre of ejaculation. All conditions for the perfect performance of fruitful connection are present, except seminal fluid.

The case differs somewhat from others of the class, as there is not now, nor has there ever been, any discharge from the urethra, even in the form of pollutions, and hence Doctor Sims considers it a case in which there is no secretion of spermatic fluid and consequently the sexual passion is necessarily not perfectly developed; or, more correctly, there is a partial delay of development of sexual passion, and, as a result, no secretion of semen. He is also inclined to believe that under the regular sexual hygiene of married life the testicles would very probably assume their proper physiological function.

In regard to the propriety of marriage in cases in which there exists permanent sterility, there should be no hesitation in advising against it. The man who is unable to obey the command, "Be fruitful and multiply," has no right to disappoint the hopes and imperil the happiness, and perhaps the health, of a woman.—*Virginia Medical Monthly.*

The Anal Reflex.—In healthy man, a gentle touching of the skin and mucous membrane of the anal region gives rise to an immediate reflex contraction of the anal

sphincter (the "anal reflex"). When present in a strongly developed form, the reflex is usually accompanied by a drawing-in (or elevation) of the anal orifice.

The anal phenomenon belongs to the most constant musculo-cutaneous reflexes in a normal human being.

The anatomical centre presiding over the phenomenon appears to be situated in the lower portion of the lumbar enlargement of the spinal cord, since, as experiments on dogs have shown, a high division of the spinal cord is followed by an increase in the reflex; while, on the other hand, the phenomenon disappears as soon as the cord has been divided at the level of the third sacral nerve root, or when both of the fourth posterior sacral roots have been destroyed.

A diminution or a total loss of the anal reflex may be observed in cases of locomotor ataxia, multiple neuritis, neuritis of the sciatic nerve, and myelitis involving the lower portion of the lumbar enlargement of the spinal cord.

An exaggeration of the anal reflex may be met with in cases of high transversal lesion of the spinal cord, and in neurotic patients presenting increase in musculo-cutaneous reflexes in general.

The condition of the anal reflex, side by side with other symptoms, may prove a useful adjuvant diagnostic sign in cases of differentiation between organic and functional diseases of the nerve system, and in cases of determining the localization of the morbid process in this or that division of the nerve system.—Rossolimo, in *Vratch.*

Habitual Headaches.—Habitual headache very frequently is of nasal origin. Even in neurasthenia and hysteria, headache may be only due to some local nasal affection, and not be a single symptom of the total symptom-complex. Grave diseases of the nasal cavities and their appendages may exist for a long time without the patient noticing them, while his headache is terrific, and only by the nasal symptoms becoming more distinct is the attention of the physician called to the true source. Neurasthenics are more easily affected than healthy subjects by these nasal irritations; often their headache is of local origin, and they will be frequently relieved by appropriate local treatment. Most patients with swelling of the mucous membrane of the turbinated bones suffer from more or less headache, and hence, where no known cause can be discovered in a case of headache, I advise examination of the nose, in hysterics and neurasthenics as well. Polypi are also a cause. The pain originates at th root of the nose, and radiates into the eye c the temple, or there is a constant dull pres ure over the root of the nose, which often associated with dull headache. Especially i cases of catarrh, with hypertrophy of th mucous membrane of the turbinated bone is there a distinct listlessness, and inability c loss of desire for mental exertion. Empyem of the maxillary sinus is often accompanie by headache on the corresponding side, an a sensation of pressure at the root of the no —often severe neuralgic pains in the front region.—Doctor J. Scheinmann, in *Berlin Klinische Wochenschrift.*

Relics of Evolution.—The coccyx is or of the vestiges of our animal ancestors, an presents an example, perhaps, of a reversio to the older type. We are familiar with th caudal projection of the human fœtus that like that of the animal, and we see in the di secting-room, at times, the vestiges of th tail muscles inserted into the coccyx:

The *plica semi-lunaris* is a vestige of th nictitating membrane found in certain bird

There is the pointed ear, or the turne down tip of the ear, of many men:

The atrophied muscles, such as those th move the ear, well developed in certain peopl or that shift the scalp, resembling the actio of the horse in ridding himself of flies:

The supra-condyloid foramen of the h merus:

The vermiform appendix:

The location and direction of the hair c the trunk and limbs:

The dwindling wisdom teeth:

The feet of the fœtus, strongly deflecte inwards, as in apes, and persisting in the ear months of life, together with great mobili and a distinct projection of the great toe, an angle from the side of the foot:

And the remarkable grasping power of th hand at birth and for a few weeks thereafte that permits young babies to suspend th whole weight on a cane for a period var ing from one-half to two minutes.—*Scientif American.*

Hystero-Epilepsy from Worms.—A pea ant lad, aged eighteen, came under observ tion with "fits," recurring with increasin frequency and severity, that began original in 1885, at first occurring twice or thrice year. Now they occurred several tim weekly, the seizures lasting from one two-and-a-half minutes, mostly recurring su cessively twice or thrice, with intervals var

ng from five to ten minutes; they consisted n exceedingly violent clonic convulsions accompanied by loss of consciousness, insensibility of the pupil, trismus, etc., being ushered n by *globus hystericus* or epigastric pain, sometimes by vomiting, and invariably shortly after a meal. After the attacks he remained n a drowsy state for one or two hours, coming round but very slowly and looking extremely weak. The administration of potassium bromide in increasing daily doses of from twenty to eighty grains, during a month, and a subsequent course of laxatives, did not produce the slightest effect on either the frequency or the severity of the fits. Ultimately, having elicited the fact that the lad had voided "a worm" five years previously, I tried santonin in one-grain doses three times daily, for three days, with the result that even ascarides were expelled, after which all epileptic symptoms vanished as if by magic, and never again recurred.—Doctor S. N. Koneff, in *Meditzinskaia Beseda.*

Action of the Liver on Poisons.—The liver modifies the toxic effects of several poisons, notably nicotine, atropine, quinine, and strychnine; also certain putrid and intestinal poisons, peptones, and some salts, particularly ammoniacal salts. On the other hand, the liver exercises no influence over other substances, such as digitalin, potash and soda salts, glycerin, etc. Like the kidney, it possesses an elective action. To control these results it is necessary that the poison should be absorbed very slowly. In the case of a diseased liver (cirrhosis, fatty degeneration, etc.), in which the parenchyma no longer contains glycogen, the organ does not act on poisons, but it suffices to administer substance capable of forming glycogen to give the hepatic gland again competent to transform poisons. The action of the healthy liver is continually exerted against toxic substances in the system, and is still more marked in those infectious diseases in which decided toxic effects are produced. Some clinical facts go to prove that many morbid symptoms are due to insufficiency of the liver in regard to poisons.—Doctor Roger, in *Le Progrès Médical.*

Fibroids and Pregnancy. — Hofmeier denies that fibroid disease of the uterus has any direct influence in causing sterility. Statistics do not show that subserous myoma predisposes to sterility. Nor can it be shown that fibroids promote fertility. These tumors seldom begin to appear till late in sexual life, so that if the patient is barren or a multipara, the causes of sterility or fecundity must have influenced her long before. The alleged frequency of this disease in elderly virgins is based on fallacy, since it is the affection which most readily drives a spinster to the gynæcologist, whilst middle-aged married women trouble themselves less about small and slow-growing abdominal swellings. Women with fibroids who marry late in sexual life are fairly fertile. Fibroids by no means strongly predispose to abortion, for this accident happens only when the uterine cavity is rendered unfit to bear through the size and relations of the tumor; nor does fibroid greatly interfere with the uterine contractions during labor. The best time for hysterectomy is not immediately after delivery, but a few weeks or months later. — *British Medical Journal.*

Superfœtation.—A woman, thirty years of age, multipara, ceased menstruating May 10th; on August 4th profuse hæmorrhage came on, which continued, more or less, until November 2d, when she miscarried, with not more than four uterine contractions, a female infant, no hæmorrhage following. The placenta was complete, bloodless, pale, and granulated. At the moment of delivery something like a cotyledon detached from the placenta could be felt in the vagina, which, when opened, revealed a small amount of liquid and an embryo of scarcely three months, the different constituent parts of which were quite evident but in a condition of degeneration. There was an adherent placenta in the same condition. The child of six months lived some hours.

This coincidence of two germs—the one dead, which Nature endeavored to expel by means of the hæmorrhages, the other living, notwithstanding the serious functional disturbance of the uterus—is quite rare.—M. Dufour, in *La Médecine Moderne.*

A New Symptom of Cancer.—G. Bogdan relates the case of a woman, aged forty-eight, who through a long period of latency suffered from cancer of the stomach. Each cheek presented a patch of wine-red discoloration formed by the dilatation of the superficial venules, and that showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone, Bogdan was able to make a diagnosis of probable cancer at a time when there was no other sign of that affection. He regards such superficial varicosities on the cheeks as a

valuable help to the early recognition of certain cancers; has seen it in about two-thirds of his cases, and finds it particularly frequent in epithelioma of stomach and uterus.—*British Medical Journal.*

FUNCTION OF THE SUPRA-RENAL CAPSULES.—Total extirpation of these bodies, either simultaneously or with an interval between, invariably causes death after a maximum lapse of two, three, or four hours. This ablation immediately causes intense shock, with phenomena of stupefaction and of general collapse, especially of the heart. Section of the spinal cord in advance, or the exhibition of atropine, notably retards these symptoms, and at the same time diminishes their intensity. The theory of auto-intoxication appears less in accord with these facts than does that of a violent neurolytic action, thus apparently confirming the recent opinion of Fusari that the supra-renal glands are nervous ganglia.—DE DOMINICIS, in *Archives de Physiologie.*

VARICES OF ŒSOPHAGUS.—Professor Lubimoff communicated to the Medical Society of Kazan (Russia) an account of the demise of Professor Studenski, who in the morning appeared in good health, but in the evening vomited blood, which continued during the night, death taking place upon the third day. The autopsy revealed atrophic cirrhosis of the liver, and thickened and dilated veins of the mucous membrane of the œsophagus toward its lower third. Fatality was due to hæmorrhage from the varicose veins of the œsophagus; the accumulation and stagnation of blood in these vessels was the consequence of the cirrhosis of the liver. The case is of interest on account of its rarity, and also the latent course of the cirrhosis.—*La Médecine Moderne.*

SUPERNUMERARY TESTES.—In making examination of a recruit for the United States Army, I found him with four testicles. Three were on the left side of the scrotum, and one on the right, all apparently perfect, yielding the peculiar pain incident to pressure. Three were large and well developed, and one, situated high up in the scrotum, was small.

There appeared to be but two spermatic cords, though the two large testicles in the left side seemed connected by a subsidiary spermatic cord, which I suppose would indicate that one was supplied from the other.—ALEXANDER M. DAVIS, in *Medical Record.*

ICE TO RELIEVE DYSPEPSIA.—Pictet found that when dogs were plunged in a bath of low temperature, and kept there some time, they became ravenously hungry. Being himself a sufferer from stomach disease, he had forgotten what it was to have an appetite; so, wrapped in a thick pelisse, he descended into a refrigerating tank, the temperature being many degrees below zero. After four minutes he began to feel hungry; in eight minutes he climbed out of the tank with a painfully keen appetite. Many such experiments were made, and all the meals he took after a short stay in the refrigerator agreed with him. He found his dyspepsia was cured after the tenth descent.—*Exchange.*

ÆTIOLOGY OF CHILLS.—Chills differ very much, but may be divided into two main groups: Those from sudden shock to the nervous system, and: Those from absorption of toxic material. In so-called nervous chill, fever is absent. In the second group there is always fever. The nervous chill is that met with in gallstone colic or in the passage of a catheter. This initial chill is without fever, but subsequently, of course, there may be chills with fever due to infection. The disease most often associated with chills is malarial fever, and here the chill is of a characteristic kind, so that the name "chills and fever" is synonymous with malaria.—OSLER, in *Medical Record.*

ANGINA PECTORIS AND MALARIA.—M. Lancereaux believes malaria may excite a special arteritis, situated generally at the beginning of the aorta, and which may or may not be accompanied by constriction of the coronary arteries, but is always accompanied by neuritis of the cardiac plexus, and is manifested by the clinical signs of especially painful angina, with radiation to the side of the head and sometimes ptyalism. The crises occur without assignable cause. In every other respect the symptoms are exactly those of angina pectoris, due to arteriosclerosis, constricting the coronary arteries and affecting particularly their internal coat. —*La Médecine Moderne.*

RICKETS IN NEGROES.—Doctor Geo. N. Acker declares that negroes are almost without exception rachitic. Venereal disease is common, and hereditary syphilis frequent; this affects the nutrition of the infant, and rachitis results.

The Medical Age.

VOL. XIII. DETROIT, MAY 10th, 1895. No. 9.

Original Articles.

MEDICAL HISTORY, AND ITS IMPORTANCE

BY P. C. REMONDINO, M.D.

It is pleasing to note the awakened interest that pervades the body medical in regard to the importance of the study of the history of our science. The *Annals of Anatomy*, of Brooklyn, some years ago published a series of biographical sketches of the medical leaders of the revival period; and the *Brooklyn Medical Journal* has since given us a fine series of portraits of the great European masters in medicine of the seventeenth and eighteenth centuries. THE MEDICAL AGE is now publishing the interesting course of lectures on the History of Medicine delivered in the Medical Department of the University of Buffalo by Professor Roswell Park; and the editor of the *Tri-State Medical Journal* now and then favors his readers with some well selected excerpts illustrative of the history of medicine and of medical bibliography.

I was well pleased to see, published in a late number of the *Ohio Medical Journal*, another departure in the same line, in the shape of a condensation of a lecture delivered by Professor James T. Whittaker, of Cincinnati, on the history of tuberculosis—although I should have preferred the lecture in full. That which Professor Whittaker says regarding the subject of tuberculosis, namely, that "you may obtain no real familiarity with a disease without some knowledge of its history," is equally applicable to all diseases. There is too much unconcern among moderns regarding the labors of former generations of medical men and the diseases with which they had to contend.

As Professor Pepper very truly observes, the last generation has been one of wonderful progress in medicine, but we must not overlook the fact that much of that progress has not yet crystallized into permanent form, and that much of what we have accepted as established we will in the end have to relinquish as impracticable; the tests of time, experience and observation are yet to do their perfect work. In medicine we should be optimistic with our patients, but most decidedly conservative and skeptical concerning the adoption of untried or insufficiently tested means. He who allows himself to be seduced into adopting every new idea or theory, will in the end become a more confirmed and hopeless medical pessimist than he who calmly waits for results before becoming too enthusiastic.

Many of our so-called advancements are merely a rehabilitation of ideas that were long ago discarded, but now appear as new because set off by a modern environment. Even during the Roman epoch of medicine, in the first centuries of our present era, there arose a sect which bore the same relation to the Broussaisism of that period that homœopathy has borne to that of our own century. A careful study of the history of our art and science would, by maintaining a better equilibrium, prevent much of this running to extremes as well as the necessity of a restraining remedy.

There is no way in which we may gain so thorough a knowledge of a disease as by studying its history across the centuries. Studying a disease in a text-book is a dry and often a misleading occupation; but the history of the same disease, with its varied aspects and modifications as influenced by varying civilizations, and the methods employed to combat its ravages or to hold it in abeyance, invests the subject with an interest that it never before seemed to possess. Medicine has as interesting a history as has war, architecture, painting, or music. If we find it a dry and uninteresting study, the

fault is not in the theme but in the teacher. Certain professors are always listened to with pleasure, and the student feels that his time has been profitably spent, because more than the mere anatomy of the question is dealt with, and secular history is made to yield its comment and its illustration. Uninteresting and too prosy lecturers make of medicine a repellent study, and the student soon tires of his task. Some professors, good men at bottom, hard students themselves, and unquestionably capable practitioners in their chosen specialty, are nevertheless very poor teachers, and act as wet blankets to the ardor that each student should carry into his work. Such men could greatly improve themselves and increase their sphere of usefulness, and from being dreaded bores become most interesting and instructive lecturers, simply by studying the history of their particular branch of medicine. The desired interest on the part of the student is often awakened by the narration of clinical cases in connection with the description of the disease. This was the charm of many of the works on medicine of the earlier quarter of the present century. It was this that made Watson's Practice, Graves's Clinical Medicine, and Trousseau's Clinical Medicine so classical, so readable, and so instructive. These works give a better and more comprehensive idea of the subject treated; the student not only obtains a better view of a disease in its entirety, but is better enabled to trace its ramifications as well as its relations to other conditions. Watson's work has continued to be a highly recommended class-book, regardless of the changing views as to the treatment of diseases—on account of its great value as an entertaining educator. It has often been said that Watson lent a touch of romance to medical subjects which would lead one unweariedly and unconsciously from page to page, whilst many other works on the same subject would from their want of objectiveness fail to fix the attention.

Why have so many Americans considered a final European course necessarily supplemental to their already acquired American medical education? Is it not because they feel the need of a philosophical knowledge of the history of our science? Dunglison's History of Medicine, although recommended as a college text-book, and although very concise as well as comprehensive, was, nevertheless, hardly read by one student in a hundred. Watson's History of the Medical Profession in Ancient Times, the production of a New York physician and a most readable and instructive work, had but few readers; and Thatcher's Medical Biography, Fort's Medical Economy, Draper and Lea, and Comegys' translation of Renouard, are found in the libraries of but very few physicians. These about complete the list of the works of American historians of medicine; and the reason why they are so little known, read or studied is to be found in the fact that but little used to be said by any of our teachers that would call our attention to the existence, much less to the importance, of this branch of study, and to its broadening scope when applied to the study of diseases in particular or of medicine in general.

In Europe there also existed a more complete as well as a better detailed system of clinical instruction; men there "walked the hospitals;" whilst the student in Philadelphia, Boston or New York turned over for another morning nap, or lay awake trying to remember and fix some of the previous day's lectures, his *confrère* gone abroad after graduation was hastening through the gray morning dawn or the still lamp-lit streets of Paris toward some of its many hospitals, there, with half a dozen or more other students, to follow a professor from bed to bed, listening to remarks on the nature of diseases and observing methods of diagnosis and of treatment at the hands of men who were well versed in the history of their art from Hippocrates down to their own time. Thus the student abroad was fitted for special courses of instruction specially devoted to this branch of study, which he could further supplement and extend by consulting a most complete and comprehensive literature—a literature rendered additionally interesting by local traditions and the respect with which the memory of noted medical men is held in France, not only by the profession but by the laity.

The study of the history of medicine exhibits the intimate relations which have always subsisted between this and other

branches of philosophical science. Medicine is nowhere so isolated as in the United States. This condition is not so marked as it was twenty years ago, but it still exists. The American Public Health Association, the New York Medico-Legal Society and its journal, and other kindred associations, have done much in late years to bring us more closely together and make us acquainted with each other; but there is not as yet that mutual understanding and retroactive reliance and support that should exist between the learned professions and the philosophically trained of the nation. This is evident from the little influence which the body medical exerts in governmental matters. Were there a better and a more diffused knowledge of the history of medicine, and of the necessary and unavoidable influence that this art has at all times exerted on social development and national affairs, its real relations to government would be better recognized and understood as well as appreciated. Were the profession to make more of this study, it would encourage its pursuit among other philosophical bodies, who would then recognize a familiarity with its main details as being an important mental accomplishment, or at the least as being contributory to a thorough acquaintance with general history, as nothing so explains the social and mental development of an epoch as its condition in relation to medicine.

Of late, the awakening to our neglect of this branch of the history of philosophy has stimulated some action in the proper direction, and we hope before long to see established in the more complete of our faculties chairs devoted to the history of medicine. Heretofore but little effort has been made to excite in the student a taste for more thorough research. A properly arranged course of lectures should cover the progress of the art as a whole, the careers of its leaders, and the birth, rise and fall of each prominent epoch or theory, as well as the philosophical reasons for their existence and disappearance. Each branch of medicine, like every prominent group of diseases, has its well defined history.

As a necessary part of the work, the history of charlatanry and of the ignorant or the trained empiricism that restricts itself to some one medical detail, should not be neglected; it all forms a part of the history of the art, even as an humble scullion forms an important part of the great establishment of a royal palace. There is here a strong analogy between fashion and medicine; for as many of the innovations of the former are originated by the despised *demi-monde*, so in medicine many an innovation or even great departure has originated in the fertile and venturesome mind of some utterly reckless quack. That great admixture of science and charlatanry — Bombastus Paracelsus — wrought such a change in the methods of treatment, upheaved pathological ideas, and raised such a war and such dissensions in medicine as he never dreamed of doing—a war whose remote little wavelets disturbed even the serenity of the surgeons of the Union army at the beginning of our great Civil War, when of a sudden and much to their disgust they found that the Surgeon-General had sided with Guy Patin, of the times of Louis XIII., in regard to antimony!

Good old slim and tall Patin—who, by the way, had much in his personality and individuality that reminds one of Professor Gross —was one of the most stubborn and formidable of opponents to the indiscriminate and murderous use of antimony which was then creating such havoc. Many of our Western men—fighting stubborn malarial complications on the Ohio and Mississippi, and thrown in contact with the excessively emeticizing and purging disciples of Thompson, and having to deal with the almost impossible-conditioned livers and dried skins of the lowlands of Missouri, southern Illinois, and of Indiana, —had nearly lost their heads from the *milieux* in which they were placed: located on malarious bottoms, with a set of iron-constitutioned patients who demanded the most active, rapid, and drastic treatment, and surrounded by a wild crop of ignorant and irresponsible Thompsonians; and tartar emetic and calomel were called in to antagonize lobelia.

These methods. carried into practice upon the softer-tempered constitutions of the more juicy and redder-blooded residents of the Middle and Northwestern States, were followed by most disastrous results, and autocratic powers were called into requisition to save from annihilation that part of the army

which had escaped the wild charge of the Black Horse Cavalry, the masked batteries and the leaden hail of Stonewell's brigade at Bull Run. Specimens still in the Army Museum show the ravages made by the "salivators" of the period, although most of the cases of tartar-emetic poisoning were quietly buried without saving the specimens.

I well remember nearly slaughtering a drummer-boy, belonging to a Georgia regiment, who was then a prisoner of war and as such confined in Ward 21 of the U. S. General Hospital at Fortress Monroe. Ward 21 was then detailed as a prisoners' ward exclusively, for the use of the Military Prison. I was in charge of that ward at the time, and was filled with more science than experience. I shall always feel thankful to Doctor Pease —a short, fat, asthmatic doctor, but a sensible old soul, who had formerly practiced in Connecticut—for his sound advice, which at once cut short, then and forever, any admiration that I might have possessed for the tartar-emetic treatment of pneumonia. The drummer lived after a radical change of treatment to whiskey and milk and muriate of ammonia, and was able to return after the close of the war to assist in reconstructing the South; and I have never forgotten the lesson. A better knowledge of the history of medicine would certainly have made it unnecessary.

San Diego, California.

EXPERT TESTIMONY.*

BY SAMUEL W. BURROUGHS.†

(*Continued from page 229.*)

In view of a previous study of these decisions, and others of less interest though somewhat analogous, I was carefully guided in the chief and cross examination of certain expert witnesses in the successful prosecution of some very important cases arising in this county, while in the capacity of your prosecuting attorney.

In the case of People *vs.* Hull, wherein Hull shot and killed Dubois, Doctor John McCullum of Harper Hospital testified as an expert, in answer to my questions, that he was a regular and practicing physician and surgeon; that Dubois was brought to the hospital and that he examined carefully his wounds; that this examination was made in the evening, just after the shooting and while Dubois was still alive; that as a result of this examination the Doctor found "a small opening in the right cheek, just over the jawbone, . . . and the opening was about one-eighth of an inch in diameter, very small, and little blood oozed from it." That was all he could discover thus. He did not probe the wound at all, because he deemed it inadvisable at that time on account of the shot. He also testified, in answer to me, that Dubois died at the hospital the next morning at about three o'clock, November 22d, 1890, as a result, in his judgment, of the gunshot wound that he saw upon the head of the deceased.

He also held an autopsy, and made a report of it as follows;

External wound near angle of jaw, surrounded by powder marks, outer edge dark in color; dry blood protruding from nostrils; over outer angle of right eye, mark of contusion present one inch long, centric portion black in color.

Cut was made, passing from symphysis menti, around angle of jaw, to mastoid portion of the temporal bone. Tissues cut through, infiltrated with blood. Ball passed behind angle of ramus of inferior maxillary bone, passed upwards, backwards and inwards.

Scalp removed; bruise over eye showing extravasation of blood beneath periosteum. No depression in skull.

Top of skull removed; considerable effusion of blood beneath membranes, gushing out when opened. Congestion of whole surface of brain; more effusion at occipital portion. Ball passed through, striking styloid of temporal bone, thence through petrous portion into right lobe of cerebellum, where it was found at about the centre and extracted.

Right posterior lobe of cerebrum contained cavity which would hold about three ounces of blood, caused by pressure.

Offered and received in evidence without objection.

The theory of defense was self-defense and that while the fatal shot was fired by

*Read before the Wayne County Medical Society.

†Ex-Prosecuting Attorney for Wayne County, Michigan.

defendant he was lying on his back and being pounded by Dubois, and that as a result of the position of the two men thus the ball entered near angle of jaw, passing upwards, backwards and inwards at an angle of about forty-five degrees.

The People's contention was that the men were standing about twenty feet apart when defendant fired the first shot, and that when he fired the second or fatal shot Dubois had closed in within about three or four feet from defendant, and in falling fell with his head between the legs of defendant, pitching forward, hence the blood on the bottom of defendant's pantaloons.

Mr. Hawley, in support of defendant's theory, put this question on cross-examination:

Q.—Doctor, will you turn your right to the jury so as to illustrate? I want you to illustrate, as near as you can, the direction in which this bullet wound entered the cheek, whether it ranged upward or downward as it entered?

The answer was:

That is impossible to tell. The wound was not acerated at all; it was a small circular opening, very circumscribed. So you can only tell that the bullet must have glanced backward off that bone underneath.

Thus Mr. Hawley succeeded in drawing from the witness the fact that the bullet, in entering, passed upward at an angle of about sixty degrees from the horizontal.

On redirect examination I propounded this question and obtained the following answer:

Q.—After making a close observation and examination in reference to the subject matter of Mr. Hawley's last question, can you tell whether the bullet struck the man when he was lying down, or whether it was the result of the glancing of the bullet after hitting the jaw-bone?

A.—I could not tell what position the man was in; I judged it would be from the glancing.

It will be observed that the theory of the defense was not sustained by the testimony of this expert witness. So Mr. Hawley called Doctor John J. Mulheron, and, having called his attention to the testimony of Doctor McCullum and to the report of the autopsy, proceeded with this question:

Q.—Under such circumstances, and upon the facts which you have before you as to the probability of the proximity of the weapon to the man's face when the shot went off—

Here I objected, on the ground that the jury were just as good judges of that fact, they having heard the evidence, as this physician was. I did not argue my objection, not wishing to deprive defendant of any advantage obtained on this line; and the witness was allowed to answer:

I should think that the muzzle of the weapon was within a foot of the man's face.

He also testified hypothetically, in answer to Mr. Hawley, that the bullet would not be apt to have taken that course if, when the pistol was fired, the man was standing erect; that the shot must have been fired from below upwards, and that the bullet would have taken such a course if the man was lying flat on the ground and the other was on top of him.

So the physician who made the personal examination of Dubois, both before and after death, could not tell whether the man was standing or lying down when shot, but thought the angle of the course of the bullet was the result of the ball's glancing from the bone; while the other physician based his opinion upon the examining physician's testimony, without having seen Dubois at all, and gave that opinion to the effect that the bullet would not be apt to have taken that course if, when the pistol was fired, the man was standing erect.

Mr. Hawley also called Doctor Wright, who testified that with the aid of the microscope and the use of certain chemicals he made an examination of the pantaloons and coat of defendant, and found blood stains upon them, finding blood-corpuscles, or the solid particles of blood.

Upon my cross-examination of the Doctor I elicited the statement that he found upon defendant's clothing staining material which was not blood; found substance which, in his judgment, was paint, and as a medical expert he could not tell whether the blood found was that of a human being or that of a warm-blooded animal. Doctor Reynolds, who helped make the examination-of-blood tests, was called by the prosecution and testified substantially the same *pro* and *con*, illustrating the peculiar differences of opinion in medical experts, and especially when twisted by the logic of trial lawyers who are up in the art of expert examination.

The testimony of Doctor McCullum was clearly competent under the doctrine referred to; that of Doctor Mulheron was incompetent under his own preliminary showing in the case, and upon my objection, if urged, should have been excluded under the following authority:

It has been held that a physician or surgeon is not an expert as to the manner of giving blows upon the head, and is, therefore, incompetent to express an opinion as to the position of the body when struck.—The form, nature, extent, depth, length, width and direction of the wound being given, and its precise location on the head, with a general statement of the amount of force requisite, and the probable shape of the instrument, the jury can judge as well as any one of the position the head or body probably was in when the blow was given.*

The testimony of Doctor Wright was clearly inadmissible, on the ground that the clothing thus examined had been kept in the possession of defendant and his friends from the time of the killing to the day of trial, when it was introduced, and no notice was given to your humble servant of the intention to have experts make an investigation of the clothing for the discovery of human blood, before the trial, on behalf of defendant.

We are taught by Wharton and Stille's Medical Jurisprudence, Pt. II, § 1249:

It is important in many cases that notice should be given to the opposite interest, of the intention to have experts make an investigation of the facts involved, in due season and before trial. For instance, if it is proposed to make an examination of blood on clothing, or of the stomach of a deceased person in case of alleged poisoning, there are strong reasons why such an examination should be undertaken after notice has been given, in order that the adverse interest might be properly represented at such an examination.

And it has been held that there can be no question that when the matter comes fairly up, such examination, when taken flagrantly, *ex parte*, at a time when there could readily have been notice to the opposite side, will be ruled out as inadmissible.

I was perfectly familiar with these legal restrictions when I conducted that prosecution, but did not at the time insist upon them, nor cite the above authorities in support of exclusion,—because I was confident that the defense was at my mercy. The result of the trial demonstrated that my confidence was not misplaced. The verdict was "Murder in the first degree," which verdict upon appeal was afterwards reversed, and upon a third trial respondent was acquitted—but as a result of no mismanagement or lack of judgment on my part.

July 31st, 1891, at the slaughter house of Hammond, Standish & Co., corner of Twenty-second and River streets, in this city, Charles Bigley, then about fifty-two years of age, shot and killed Fred Garand. Defendant's brother was manager of the business, and defendant had at various times been employed at the slaughter house; but had been discharged on each occasion for drunkenness. His victim was an assistant to the manager, and was an industrious young man about twenty-four years of age.

Bigley laid his last discharge—which occurred early in July—at young Garand's door, and he appeared during the noon hour of the fatal day in the yard where Garand, with other hands, was eating his dinner. Raising his carbine to his shoulder, he deliberately pointed it at Garand, and, with the remark, "*Get out of the way, boys, I want to shoot Fred,*" he pulled the trigger, sending a bullet through Garand's abdomen.

The wounded man was taken immediately to Grace Hospital, where he died within ten minutes as a result of the shooting.

Bigley was arrested at a saloon only a block from the scene of his crime, within half an hour. On the trial in the Recorder's Court, in October (22d and 23d), 1891, I appeared and prosecuted.

Bigley was defended by Judge Robert E. Frazer, who very ingeniously contended that defendant's reason had been dethroned by too much drink—not that defendant was drunk at the time, but that he was demoralized and his nervous system was completely shattered as a result of habitual intoxication; that his mind was gone to the extent that he was not responsible for his rash act.

Doctor W. F. Metcalf, who saw deceased and examined the wound, was called, and having testified that the gunshot wound was

*Kennedy *vs.* People, 39 N. Y., 245, 256.

the cause of death, Mr. Frazer tried to draw from this physician — basing his questions upon the hypothesis of habitual intoxication —the opinion that Bigley had become irresponsible by the constant use of liquor as a beverage; but in this he failed. The witness declared that he was not an expert and had made no special study of the mental results of hard drinking.

I drew from all defendant's witnesses and from himself the fact that all his drinking and all his use of liquor as a beverage was the result of his own voluntary and wrongful indulgence; and contended that, this being so established, insanity thus brought about and which affected no person until aroused by sudden anger, and which subsided the moment the angry passions passed, was no excuse for crime. In support of my contention on the part of the prosecution I cited the following authority:

An offender under the influence of intoxication can have no privilege by reason of a madness voluntarily contracted. If an offense be committed by a party during a fit of drunkenness brought on by his own wrongful indulgence, no matter how great the deprivation of reason may have been, it will not excuse him from punishment; but he is answerable to the law equally as if he had perpetrated the act while in the full possession of his faculties.*

The trial resulted in the conviction of Bigley of murder in the second degree, and he is now in the penitentiary serving his sentence.

Fred Luth was cut on the head on the evening of August 3d, 1891, and died the next morning. Christopher O'Brien was informed against by me for the murder of Luth, and upon his trial Doctor Richard J. Kelly, in answer to my questions, testified:

I am a physician and surgeon, and have been about eight years in Detroit. I was called into Fred Luth's place on the morning of August 4th. I examined his body and found two wounds on his head, one about two and a half inches long across the top of his head, and the second one on the left side of his head about three-fourths of an inch posterior to the lower angle of the eye, over the temporal muscle. Both wounds penetrated to the bone, and were made with a sharp instrument. Fred Luth was dead when I saw him, and in my judgment his death was caused by the wound on the temple. I made the post-mortem together with Doctor Siebert, a friend of his and an assistant of mine.

Doctor John F. Siebert, in answer to my questions, testified:

I am a practicing physician and surgeon. August 3d, 1891, was located at 818 Gratiot avenue. Knew Fred Luth before he was hurt. . . . Was called upon to make an examination of Fred Luth on the night of August 3d, about 10.15 P.M. . . . He came to my place of business, coming up stairs, and I found he was all covered with blood, and he told me that he had been cut on the head, and asked me to make an examination to see the extent of the injury.

After washing off his head, I found a wound across the top of the head and side of his head about two inches long, and another over the left temple, from the external angle of the eye, over the eyebrow, slanting across the temple; it must have been two inches long. I examined the injury and could not find any fracture, and did not think the injury was as serious as it was.

He had lost a great deal of blood, and in consequence was very weak. . . . I did up the wounds, so that they were partly sewed up, and sent him home. At the time he was perfectly conscious yet. I did not expect the result at all that the next morning brought about. About a quarter to seven the next morning John Luth came to my office and told me to come down, that his brother was dying. . . . I went over, but found him dead.

I . . . made a post-mortem examination. The cut over the left temple was the cut that caused his death.

I knew Mr. Fred Luth in his lifetime; he was a healthy looking man.

Q.—Did you have any conversation with Fred Luth as to who cut him?

A.—He told me.

Q.—State what he said to you about it?

Objected to as incompetent. Overruled. Exception.

A.—I asked him what caused the wounds, and he said he had been cut by a knife by Mr. O'Brien. I didn't ask for details at all.

On the trial O'Brien was defended by G. X. M. Collier and Geo. F. Robison, attorneys.

On the part of the prosecution, and in addition to the testimony of the physicians, I introduced testimony tending to show the following facts:

That defendant first assaulted John Luth and then his brother, the deceased; that then defendant was driven out of the place by the

* Tiffany's Criminal Law, page 18, with authorities cited in support of this doctrine.

two brothers, and as he passed out he was heard to say, "I'll fix him to-night," or something similar; that within ten minutes he returned and attacked deceased with a knife (in the language of witness Leonard Mueller, who saw the attack: "O'Brien had Luth up against the wall. They were clinched, although he was powerless. Luth didn't have anything in his hand. The other man had a case-knife, a sharp one"); and that O'Brien cut Luth with the knife; that he had made previous threats; and that when he heard of Luth's death the next morning, he exclaimed that he was glad of it and only wished he had killed him a month ago; and that also he told Officer Manning, as appeared in evidence, that the reason he cut Luth was because Luth was jealous of him—and this admission was made voluntarily the next morning after apprehension.

The theory of the defense was self-defense, and that defendant did not do the cutting, and that he used no knife against deceased; that he was attacked by deceased with a chisel, and it was insisted upon by him that the wounds were inflicted during the affray by it—in the scuffle.

Verdict: Murder in the second degree. An appeal was taken, and Mr. Justice Grant handed down the opinion of the appellate court, from which I quote:

Doctor Siebert testified, under objection and exception, that the deceased said "he had been cut by a knife by Mr. O'Brien." This statement was not a part of the *res gestæ*, and was therefore incompetent. The question of the use of the knife was one of the most important in the case. A conviction for murder could scarcely have been maintained unless the jury were convinced that the wound was thus inflicted.

While the case made against the prisoner, aside from this statement, is very strong, yet we cannot say it is so convincing that the admission of this testimony was not prejudicial error. For this reason the judgment is reversed and a new trial ordered.

Morse, C. J., Long, and Montgomery, J. J., concurred. McGrath, J., did not sit.*

The case was retried, resulting in a verdict of manslaughter. On the appeal and retrial the defense was reinforced by Attorney James H. Pound.

* 92 Mich, pp. 17, 18, 19.

A second appeal was taken; it was claimed that I tricked the defense into conviction, and upon this claim and certain rulings of Judge Chambers, defendant O'Brien obtained a second new trial; and upon his third trial, with which I had nothing to do, having gone out of office, he obtained an acquittal.

In the preparation and investigation of these cases for trial, and many others of like importance to which I could refer but for lack of time, and in which expert testimony was absolutely necessary, I have learned:

If a physician has devoted himself exclusively to one branch of his profession and has no practical experience in the subject matter to which he is called to testify—as if an oculist is called to testify as an expert on the question of insanity—his testimony would be inadmissible:

A physician whose habit it had been, when his patients required medical treatment for insanity, to call in the services of a physician who had made a special study of mental diseases, or to recommend their removal to a hospital for the insane,—was held to be incompetent to express an opinion upon the question of insanity:*

Medical practice confined to the treatment of ordinary diseases does not qualify a physician to testify as an expert upon insanity based upon hypothetical interrogations as to supposed facts of which he had no personal knowledge.† But his testimony would be admissible if he had a personal knowledge of the facts, or if he had studied the subject of psychological medicine:

It has been held that a physician who had been in practice for several years, but who had never had experience as to the effect upon health of breathing illuminating gas, could not testify in relation thereto:‡

It has also been held, and it is well settled, that the opinion of a witness not founded on science, but rather as a theory of morals, or ethics, is inadmissible in evidence. And in this regard it will make no difference whether given by professional or non-professional witnesses. Where the question was whether a man who had committed suicide was sane or

*Commonwealth *vs.* Rice, 14 Gray, Mass., 335.

†Russel *vs.* State, 53 Miss., 367.

‡Emerson *vs.* Lowell Gas Company, 6 Allen, 146.

insane, the opinion of a physician that no sane man would commit suicide in a Christian country was held to be inadmissible, as being founded, not on the phenomena of mind, but rather on a theory of morals, religion, and a future state:*

And the opinions of medical practitioners are inadmissible on the question whether a physician has honorably and faithfully discharged his duty to his medical brethren:†

And the opinions of professional witnesses cannot be asked upon mere abstract questions of science, having no proper relation to the facts upon which the jury are to pass.

In the careful study of the law and other works of jurisprudence I have learned that many men eminent in one branch of their profession have but a superficial knowledge of other branches, and a physician who may be very able and learned in certain subjects connected with his profession may be quite ignorant of certain intricate questions of medical science; so that if all questions of medical science were left for the jury upon the examination in chief of the expert witness, and counsel on the other side were not sufficiently posted for the purpose of investigation by conducting a rigid and proper cross-examination to elicit the truth and get at the very foundation of the witness's knowledge from a scientific standpoint, that side in all probability would be prohibited from availing itself of the advantages which it might otherwise be entitled to.

It is therefore necessary, to a thorough and enlightened examination of an expert witness on an intricate question of medical or other scientific investigation, that the examiner should have made himself as familiar as possible with the subject matter of inquiry, to prepare himself for the examination of the expert witness so as to meet the emergencies of the case. Accordingly, in my practice I have spent days and often weeks in the careful investigation of the scientific questions involved, in order to get at the truth of the matter, knowing that this was necessary, to aid both court and jury, who for want of time and knowledge could not be expected to be familiar with the questions raised.

*St. Louis Mutual Life Ins. Co. *vs.* Graves, 6 Bush, Ky., 290.

†Ramadge *vs.* Ryan, 9 Bing., 333.

On the other hand it is the duty of the expert witness to tell just what he knows about the case under investigation, truthfully, as if it were the truth. He must not exaggerate or color. If his testimony be based upon personal knowledge from examination and observation, let him narrate the facts of his knowledge, to the point, in plain and simple language. If it is to be the expression of an opinion based upon the testimony of other witnesses in the case, let him thoroughly understand the hypothesis of the same and then render such an opinion as will be material, concise, honest, and convincing. He will then pass with confidence and ease the ordeal of his cross-examination, and his expert testimony will become evidence, material in character and of assistance and advantage to the court and jury in the rendition of a just verdict.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 238.*]

That the eighteenth century, up to its close, was the golden age of medicine, is due to the prevalence during that period of a strong idealistic undertone, as a result of which any learned occupation caused the scholar to be held in higher esteem than is the case even to-day.—Medicine was then regarded as *a conscientious vocation* and not as a mere business or trade; indeed, general scientific knowledge more widely prevailed among the better class of the profession, and there was much less of that one-sided, narrow education that obtains to-day. The profession, moreover, was not overcrowded; physicians were neither too few nor too numerous, consequently their social position was higher. Again, the relations between doctor and patient were more intimate, most practitioners being of the type described as "family physicians," and those possessed of the doctorate degree ranked among the gentry rather than as artisans. They were for the most part fully devoted to their calling; and, moreover,

†Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

the State took greater care to protect the people, so that it became dangerous for strolling vagabonds and impostors to attempt to trifle with human life and excite the vulgar to the prejudice of scientific knowledge.

The pursuit of anatomical studies was now facilitated, despite the fact that students frequently were compelled to take long journeys in order to obtain the "material" therefor. In the early part of this century, so great was the lack of dissecting material that the great Haller while in Paris was compelled to purloin his cadavers, and ultimately, on discovery of this fact, to fly for his life; Hoffmann was only able to make twenty dissections during twenty-four years; even in the middle of the century there was only one dissection annually in Halle: up to 1712 there had been only three dissections in a score of years—though now subjects can be had there in abundance at a ridiculously low figure; cadavers were extremely scarce in Vienna as late as 1765; and for a long time the only places in London where the study of anatomy could be legally pursued were the College of Physicians and the College of Surgeons, and the trouble that hampered John Hunter in this direction is historical. The crime of "Burking" became known in Hunter's day: murder was committed and the victim sold for purposes of dissection—for at this time, as "body-snatching" was a necessity, those who purchased cadavers asked few questions, and the fees paid were of course high.

The first clinical institution in Austria was organized in Vienna, in 1754, by Van Swieten, though there was an "ambulatory clinic" (out-patient department) in Prague nine years before. During the century, however, hospitals were everywhere in bad condition: In the Hôtel Dieu, at Paris, several patients were sometimes put in the same bed; in Vienna the Allgemeines Krankenhaus was composed of seventeen hospitals that subsequently were amalgamated into one. In London numerous hospitals were founded, and as the medical staff of each became eminent they attracted numerous pupils; but later it became necessary to relieve the hospital wards, and private institutions for instruction were established by popular teachers, the most celebrated being the "Windmill Street School of Anatomy," founded by William Hunter about 1770, and the private school of Sir William Blizzard, which, established in 1780, developed, five years later, into the London Hospital Medical School.

While few if any of the lectures were compulsory, particularly in the natural sciences, even more attention than now was bestowed upon the accessory branches; botany, chemistry and natural history were the recreation of many students and physicians. Pupils enjoyed the privilege of studying what they pleased—as they do practically to-day in the Portuguese university of Coimbra,—and professors exercised to the utmost their individuality in teaching. In Spain, natural sciences found no admission, and even so late as 1770 no instruction in these branches was given, as they were regarded as dangerous to the purity of the faith; mineralogy for mining purposes was an exception, for even the most faithful Catholic needs money.

At the universities, medical students were not permitted to go out without their scholastic cloaks—a regulation that still obtains in Spain. That the number of students has enormously multiplied may be seen from the fact that the little university of Giessen, with scarcely any medical school at all, has always more students than had Halle in the days of the famous Hoffmann. In the middle of the last century Würzburg had at one time but *three* medical students, while to-day it has in the neighborhood of five hundred. Even then it was complained than on account of the number of students there was an educated proletariat arising, and in 1791 it was proposed, in Austria, that the rush for study should be repressed.

Among the Continental students the revels and bad behavior of past centuries were not to any great extent corrected; fights and debauchery were very common, and all sorts of orgies and bacchanals prevailed. The professors were in large measure independent of the State, and a single individual often represented a number of branches now taught by special chairs. When indisposed to lecture, they simply posted upon the blackboard "*Hodie non legitur*," and this was the end of the matter. In 1777 Vienna had 147 medical teachers, and in Germany there were two to every thirty-nine students. That in the last century one man often accomplished more

than a great number of average teachers do to-day, is amply demonstrated by the lives of Boerhaave, Haller, and others. Then, too, the Latin tongue was generally employed for purposes of instruction, though surgeons for the most part lectured in the vernacular; Cullen, in 1770, was the first in Great Britain to deliver purely medical lectures in English; and as the clergy gradually retired from the ranks of the profession, Latin more and more fell into disuse. Strange to say, as the clerical influence waned, the Jews began to enter medicine, the movement beginning about 1791 in France, under the promulgation of "civil equality" ideas; previously the Hebrews had been an almost universally suppressed people, and in Berlin were permitted to enter and leave the city by only one gate and were forbidden to learn or write pure German, in consequence whereof their dialect was a Hebraic-Teutonic jargon that even to-day prevails in some portions of western Europe. Educated Jews were few in number, since attendance upon universities was ordinarily denied them, although long before they had been admitted at Salamanca, Toledo, Salernum, and Montpellier. In Austria the prohibition was not removed until 1789, and even then so bitter was the prejudice against the Semitic race that the clergy protested vigorously. It was the same clerical body that, in 1667, protested with the greatest vehemence against allowing Hebrew physicians to pass through the gates of Würtemburg without paying toll, declaring that it was "better to die with Christ than be cured by Jews who were aided by the devil."

Professors were often attached to the courts of their various sovereigns, and at one time the French court possessed a faculty of forty-eight physicians, surgeons, and apothecaries, the first two physicians being required to attend every morning when the king arose; hence originated the titles, still known in Germany, of "Hofrath" and "Geheimrath."

Medical fees, as a rule, were very small, though there were exceptional instances in which enormous sums were bestowed: Joseph II., of Austria, gave Guerin, who was summoned from Paris in consultation, an honorarium of 171,000 marks and made him a baronet. Taking all things into consideration, the income of the average practitioner in the eighteenth century would be in the neighborhood of $1,000, which however was equivalent to three times that amount to-day. Fothergill, whose highest income in a single year was $25,000, bequeathed to the poor of London $1,000,000: Sir Astley Cooper had a yearly income of from $75,000 to $100,000, but it may be remembered that his practice during the first year netted him just $26, and that it was four years later before his income reached the sum of $500.

The physician of the last century was, at least on occasions of moment, very different from other men, and to be recognized by his dress. A cap was placed upon his head when he graduated, in recognition of the fact that physicians at an earlier period belonged to the learned or clerical profession; and in later life he wore a purplish or scarlet cloak (to distinguish him from lawyers whose professional color was yellow, and from theologians who then as now sported the sombre black). The regulation full-dress costume of the English physician of the last century demanded a well powdered wig, silk coat, knee breeches with stockings, buckled shoes, lace ruffles, cap, and gold-headed cane, to which, in cold weather, was added a muff —to preserve his delicacy of touch.

Surgeons were still strictly separated from physicians, even in education; nor were they esteemed as equal in rank, until the French revolution brought about the doctrine of civil equality; perhaps this is one reason why this branch of the medical art made less conspicuous progress until recent times. The change was brought about, in France, by the abolition of eighteen universities and fifteen colleges of medicine, the Royal Society of Medicine (founded in 1776), and the Academy of Surgery (founded in 1731); but by this abolition charlatanism acquired such speedy control that the arrangement was soon abandoned. Thus it came about that surgical instruction was given in special institutions or in the universities, and the conditions of instruction finally improved. When the College of St. Côme was abolished in 1753 the Société de Chirurgie, founded in 1731, became the Académie de Chirurgie; and when the French Academy was formed in 1795, the Académie was merged into its medical department. The Ecole Pratique,

where Desault and Chopart taught, was established in 1750 for the practical education of surgeons. In England the Royal College of Surgeons was not incorporated until 1800. In Austria, in 1785, the Josephinum was opened by Joseph II., who also erected permanent military hospitals in Prague, Brünn, Milan, Mantua, Pesth, Olmütz, etc.; he also created the "Joseph's Akademie" in order to educate military surgeons and thus overcome the defects of army surgery; the Josephinum unquestionably exerted great influence in elevating the social and military position of army surgeons, and attained historical importance after Brambilla compelled the recognition of surgeons as social equals of other members of the medical profession. As the result of these improvements the various armies of Europe were soon furnished with better medical officers. Prior to this, too, the field hospitals had been as badly mismanaged as their civil prototypes, and the substitution in 1793 of movable hospitals, as suggested at the close of the sixteenth century by Henry IV. of France, was scarcely an improvement. The whole system suffered from perpetuation of the dual and distinct functions of the physician and the surgeon, to destroy which was a part of the design of the Josephinum. How unpleasant was the position of the army surgeon up to this date may be inferred from the fact that in 1758 one was subjected to corporeal punishment at the command of his colonel, and that a general upon his death-bed could leave orders that fifty blows be given each of his medical staff in case the post mortem disproved the diagnosis.

In Austria, at the beginning of the Seven Years' War, all military surgeons of the Protestant faith were compelled to become Catholics or leave the service. The condition of the wounded soldiers was as deplorable as can well be imagined; but upon this subject I cannot dwell.

The tendency of the nineteenth century seems to be a continuation, and perhaps in some respects an exaggeration, of the condition obtaining in France during the previous century; in other words, the world has become practically an enormous school of pathological anatomy and diagnosis—a school inaugurated by Bichat, as representing so-called scientific or exact medicine. Philosophically this has been a century of reaction against the idealism of the preceding age; it places the individual, rather than the idea, in the foreground. The mutual influence of medicine, philosophy and the natural sciences is less conspicuous now than formerly. Recent philosophers who have exercised the greatest influence are: Schelling, who held to the equality of the real and the ideal; Hegel, whose supreme principle was absolute reason, of which religion was regarded as a representation; Hartmann, whose philosophy of the "unconscious" depends largely upon the results of natural sciences, embraces Darwinism, and is in many respects an extension and completion of Schopenhauer's pessimism and doctrine of the soul. But one who has exercised still more influence upon our profession is Comte, whose positivism contrasted strongly with the idealism and atheism of Schelling, and who required only this of philosophy, namely, that it should work out the general ideas and results of other sciences; his most important follower was Claude Bernard, and upon these two the whole exact school of France is based. But the most influential philosophic doctrines of this or any other century have been those emanating from Charles Darwin, Herbert Spencer, Ernst Haeckel, Alfred Wallace, and their contemporaries and followers. Darwin (1809–1882) was the grandson of Erasmus Darwin, already mentioned, and his "Variation of Animals and Plants under Domestication," "Origin of Species," and "Descent of Man" have found place in all modern languages. The system known by his name is the pure science of nature—is founded upon scientific investigation—and by its merits alone has found almost universal acceptance; it has been added to and further elucidated by the efforts of Haeckel and Spencer.

When it is declared that medicine of the present is influenced by no system, it is speedily found on critical analysis that this is an error. It necessarily follows the realistic and materialistic, as readily as it did the teachings and doctrines of natural philosophy; and in consequence "medical thought," so called, is just as one-sided to-day as at any time

in the history of the art. The watchword of to-day, "natural scientific tendency," veils but does not take away its philosophic principles, and so our ridicule of earlier medical systems is quite unjustifiable. A modern historian aptly remarks that the medicine of the present "embraces nothing but a theorem of investigation by the senses."

Discoveries in botany, the result of better knowledge of natural history and more accurate habits of study, have influenced modern progress not a little; have led to better classification and broader knowledge. The natural system of De Candolle (1778-1841) of Geneva, and of Endlicher of Vienna, called into existence the so-called natural historical school of medicine; the researches into plant cells by Schleiden and Baumgärtner, and the almost contemporaneous discovery of animal cells by Schwann, became, in course of time, the origin of recent cellular pathology; then came microscopic botany, and the influence of the lower fungi in the production of fermentation and putrefaction.

Similarly, too, the laws of physics have been shown to have an inseparable connection with anatomy and physiology, and their study has become a most important aid in the experimental researches of to-day; through Helmholz they brought in the ophthalmoscope; thermal electricity, for the discovery of which medicine is indebted to Seebeck; a better knowledge of optics, thanks to Fraunhofer, who was equally expert in electricity; spectrum analysis, invented by Kirchhoff; and the varied efforts of Faraday, Graham Bell, Thomas Alva Edison, and Daguerre, the latter better known for his invention of photography. Finally medicine is immeasurably indebted to Tyndall and Huxley for their teaching of the correlation and conservation of energy.

Chemistry also has performed its share, and as applied to physiology is a discovery almost wholly within the present century. The new nomenclature serves a practical purpose in that it is now possible to portray chemical combinations and isomerism in a graphic and at least semi-comprehensive way. Among the chemists may be specially mentioned Bertholet, whose laws are as well known as they are succinct; Humboldt; Berzelius; Dumas; Chevreuil, who recently died at the age of almost 100; Magendie; Orfila the toxicologist; Gmelin, eminent in physiological chemistry; Rose, perfector of organic analysis; Wöhler, who first made organic alkaloids; Bunsen; Sir Humphrey Davy; Marsh; Faraday; Graham; Young, who first showed the industrial value of coal; and Guy Lussac.

Upon medicine, zoölogy also, with comparative anatomy and physiology, has had a wonderful influence; here may be noted the names of Cuvier, Oken, Bilharz, Brehm, Wagner, Leuckart, Richard Owen, William Carpenter, and last, but by no means least, Thomas Huxley.

But perhaps the most significant feature of the age has been the wonderful development of scientific associations and the publication of medical and scientific literature. Whether these have yet reached their climax is perhaps an open question, but the consequent widening circle of readers, as well as of writers, seems to imply that there will be for a long time to come no lack of activity in this direction. In the United States more than in any other country, medical societies and associations innumerable have sprung up, and to such a degree that (in the Eastern States at least) there are few counties that cannot boast of a medical organization.

During the present century foreign universities have decreased in number, partly owing to consolidations and partly by surrender of charters; for instance, the old University of Ingolstadt was united with that of Landshut, and in 1827 was removed to Munich; in 1816 the University of Würtemberg was united with that of Halle; the University of Bonn was abolished in 1792, but revived in 1818. A few new universities, like that of Zürich, have been founded. In the quaint old town of Prague the old German university was, in 1883, divided, and there now exist in that city two universities side by side, in one of which German is spoken, in the other Bohemian.

It will thus be seen that the nineteenth century is essentially an era of modern science, with whose dawn was sounded the death knell of the "demon of disease" and his twin brother "visitation." In 1801 the first experiment in steam navigation took place upon the Thames. In 1807 the slave

trade in England was abolished by Parliament. The theological part has entirely faded out of medicine; and the era of accurate scientific experimentation which long since dawned is now, so far as we can see, at its height, since it is difficult to conceive of much improvement upon its methods under existing conditions, or of greater enthusiasm than has been already manifested.

Now regarding some of the systems and theories of this age. The systems of the past have been more or less long-lived—as, for instance, those of Dogmatism and of Galen,—while as we come closer to the present they become more ephemeral. Those of the early part of the present century took root in the soil of the eighteenth—for instance, the so-called "theory of excitement" of Roeschlaub (1768–1835), which endeavored to mould into one the Brunonian errors and the fancies of Schelling. According to it, life depends upon irritability, but is inherent in the organism as an independent feature; so it recognizes both irritability and solidism, while Brown considered the former alone, adding as an after-thought a chemical or qualitative potency (oxygen) in order to account for alterations of quality. Roeschlaub inclined first toward natural philosophy, then, owing to an inherent theological and polemical bias (he was originally intended for the church), to mysticism and theosophy; finally, with a courage almost unexampled, he upset all his former teachings by admitting he was mistaken. To him was opposed Hufeland, who wrote on the "Lengthening of Life," was noted for a warm and benevolent heart, and possessed no small penetration, as is evidenced by his aphorism, "Successful treatment requires one-third science and two-thirds '*savoir faire*.'"

"Stimolo" and "Contrastimolo" were titles applied to a theory advanced by Rasori (1762–1837), of Milan, that combined Methodism with Brunonism; by Baas it is characterized as a "genuine blot upon the human heart beyond any other of the various systems." Long centuries of experience and the conclusions of great and venerable minds may go for naught, as Rasori abundantly demonstrated. The theories of Brown were then taught as his own to his classes in Pavia, showing he was not above plagiarism; his *Stimolo* corresponded to the sthenic diathesis devised by Brown, while his system consisted of an endeavor to made a diagnosis by watching the effects of drugs. Bleeding was held to be the best measure; if it did the patient good, the sthenic diathesis was assumed; if it made him worse, the asthenic was certain. He gave enormous doses of powerful drugs—sixty grains of gamboge, and from two to three ounces of saltpetre in a single day. Is it strange that homœopathy or any other heterodox system sprang up in the midst of such measures? It is an old saying, there is no folly that will not secure a following; and, strange to say, Rasori had a numerous and eminent one.

As just intimated, Homœopathy was the natural reaction against such heroic measures; in the rebound the other extreme was reached, even to practical therapeutic nihilism. Now instead of venesection and drastic medication came the theories expounded by Hahnemann (1753–1843), which denied disease, admitting only symptoms. This apostle of homœopathy was the son of a porcelain-painter in Meissen; he studied in Leipzig and in Vienna, and later practiced in various cities, including Dresden and Leipzig. "*Similia similibus curantur*" was not original with him, as it long before had been formulated by Hippocrates, and later by Paracelsus. Of the life and labors of Hahnemann much might be told; but this is not the time or place to go into the subject.

An offshoot of homœopathy, which demands only the harshest criticism, is Isopathy, perhaps the filthiest theory ever invented, according to which like is to be cured by like, and to such an extent that smallpox is to be treated by variolous pus, tapeworm by the ingestion of the proglottides, etc.

Another of the rankest of fraudulent outgrowths is the so-called Electro-homœopathic system of Count Mattei, who prates of "red," "blue," and "green" electricity—a theory that, in spite of its utter idiocy, has attracted a considerable following and earned a fortune for its chief promoter.

Another of the vagaries of the earlier portion of the present century, and that still survives in a weak way, is Cranioscopy or Phrenology. Gall expounded his doctrines at Vienna as early as 1796, but, being expelled,

went to Germany, where he was joined by Spurzheim, who, though much more of a student and scientist, accepted the doctrine of the former with enthusiasm; and it was chiefly due to the efforts of Spurzheim that phrenology was introduced into England, and later (1832) into America. Gall assumed to locate twenty-seven different organs alongside of each other in the brain, and held that external markings on the skull were guides to the development of the various parts. Every neophyte in anatomy knows how little foundation there is for such a doctrine, but for a time it attracted great attention, and there are to-day certain men and women who make their living out of this imposition.

The Physiological Theory of Medicine was originated by Broussais (1772–1838), and combined the views of Pinel and Bichat with the "sympathetic" view of Hoffmann, the "concealed inflammation" of Stoll, and the theory of inflammation held by Marcus. Broussais had been a pupil of Bichat. In 1814 he began hospital teaching, and in 1831 was made professor. Personally very vain, quick-tempered, even belligerent, as a therapeutist he was a man of routine. He was perhaps best known shortly before his death, when delivering lectures on phrenology. According to him, life depends upon external irritation produced by heat, which excites new chemical processes, while these in turn stimulate regeneration, assimilation, as well as contractility and sensibility. When the functions supported by heat cease, death ensues. Health depends upon moderate action of external irritants, disease upon either their weakness or their extraordinary strength. He saw nothing ontological about disease. In therapeutics he admitted the healing power of nature, but regarded the physician not as a minister but as a lord of nature. Febrile and inflammatory diseases were all treated by the withdrawal of nourishment carried to the extreme. His most powerful antiphlogistic treatment consisted in the application of leeches to the abdomen, and to robust individuals he applied from thirty to fifty at once. It is not, then, to be wondered at that in consequence of his so-called "hirudinomania" leeches became very scarce. In the year 1833 41,500,000 leeches were imported into France, while in 1824 one-twentieth of this number sufficed to supply the demand. Even in cases of worms the abdominal integument had to pay its blood tribute, particularly if enteritis prevailed. He only allowed a spare diet of mucilaginous and acid drinks. In mercurial France and Italy he gained numerous followers, but they were few and far between in practical, hard-headed Germany and England. His best follower was Bouillaud (1797–1881), who adopted the symptomatic nature of fever and the sanguinary therapeutics of his master, but used the lancet more than the leech. As the homœopaths regard Hahnemann, so Bouillaud looked up to Broussais as the Messiah of medicine and science, which, as Baas says, were "already greatly overstocked with Messiahs."

Contemporaneous with the school of Broussais, and its antagonist in all respects, was the Paris School of Pathological Anatomy and Diagnosis, which has given tone to all medical art. It made it the duty of the physician to search for changes in the human body, to investigate the local products of disease, and assigned to medicine the duty of removing these products. The tendency of its teaching was to treat the patient rather as a living cadaver than as a sentient being endowed with vital forces, and the charge which Asclepiades once falsely made against Hippocrates was revived upon new grounds. Kratzmann wrote some years ago: "In France every one experiments on the sick, less to attain the best method of cure than to enrich science with an interesting discovery and to advance the accuracy of diagnosis by some new physical sign." The seductiveness of this system promoted still more one-sidedness, which finally almost attained the belief that the science of medicine really originated in the Anatomical School of Paris.

The forerunners of this school were Bichat and Pinel, and its proper founders were Corvisart, Dupuytren, and Laënnec. There was also Bayle, who was first to apply the ear to the thorax in disease of the heart, and thus became the predecessor of Laënnec and Chomel. He was the godfather of typhoid fever, and from being a famous clinician became later a great pathologist. The most celebrated adherent of the method, however, was Cruveilhier (1791–1873), professor first

in Montpellier and then in Paris, who revived the Anatomical Society founded by Bichat, and wrote his first essays as the result of Dupuytren's advice; and finally there came from his pen the famous treatise on Pathological Anatomy, with its magnificent plates, a work begun in 1830 and not fully completed until 1864. Like Morgagni, he associated general and pathological anatomy with bedside observations; also established a class of inflammations to which belong gangrene and atony, and a certain class of neuroses and fevers; and endeavored to investigate the different steps in the development of lesions, not simply their final products. His teachings concerning pyæmia and phlebitis, which had been first studied by John Hunter, excited great attention, and he even came to the one-sided conclusion that "phlebitis rules the whole of pathology." He was the first to observe that its suppurative form does not occur primarily, but is secondary to coagulation of the blood.

The ablest representative of this school, and one who, perhaps, more than any other man, made Paris a Mecca to which foreigners made their pilgrimages, was Andral (1797–1876), the son of a physician and the most noted and indefatigable investigator and thinker of his time. Between 1823 and 1840 were published the five volumes of his Medical Clinic which made him famous. He taught, in opposition to Broussais, the existence of primary diseases of the blood, the so-called dyscrasiæ; made physiology subservient to pathology; was the creator of the chemistry of the blood; and in therapeutics was wedded to emetics and cathartics, ascribing little importance to abstraction of blood.

The first man to apply the Numerical Method to pathology, and who brought about the downfall of Broussais, was Louis (1787–1872), who had studied in Russia, but came to Paris while still a young man. He expressed his principle in the following words: "As often as I have formed an *a priori* idea and had afterward opportunity to prove the facts, I have invariably found that my idea was false. In pathology as well as in therapeutics numerical analysis is a useful practice. By numbers only can be obtained the frequency of conditions or this or that symptom; by a definite enumeration alone is it possible to utilize the special relations of age, sex, constitution of our patients," to settle that this or that symptom occurs so often in 100 or 1000 cases. This system he applied to ætiology, symptomatology, prognosis, therapeutics, and pathological anatomy. He discarded blisters and condemned large bleedings, but fell into other errors, carrying his numerical method to an unjustifiable extreme.

Next to Andral and Louis should be mentioned Magendie (1783–1855), professor of general pathology in the College de France, and physician to the Hôtel Dieu, who was a representative of the new French medicine, and introduced experiments into both pathology and physiology; he was the pioneer in experimental pharmaco-dynamics, which occupies itself largely with alkalies, a large number of which he introduced into practice. He was a solid humoralist in pathology, a most accurate diagnostician, but (it is charged) "was too simple in therapeutics"! As a result of his intravenous injections of putrefactive material, he had the terms "pyæmia," "ichorrhæmia" and "metastasis" introduced into pathology.

Trousseau (1801–1866), of Tours, also became professor in the Paris Faculty, rendered especial service in his studies of croup and the employment therefor of tracheotomy, though his chief fame rests upon his merit as a clinical teacher and the publication of clinical lectures which are still models in every way of accurate, forcible teaching.

Claude Bernard (1813–1878) became the successor of Magendie, and even more famous as an experimenter in pathology, physiology, and anatomy. Originally a poet, he finally turned to medicine and science, and in 1869 became a member of the French Academy.

One of the results of the French fondness for pathological anatomy was an outgrowth, unfortunate in some respects, of specialism which made its appearance early and spread to other countries, particularly to Germany, so that to-day there is scarcely an organ in the body which has not only its special student, but its special representative in medicine. It would be of interest to go over some of the various organs and count those who have become most renowned in the study of their diseases, but time will not permit.

As Baas says, England, after her excessive participation in the iatro-chemistry and iatro-mechanics of the seventeenth century, with a devotion which extended far into the eighteenth, seemed then to lose all confidence in systems and schools of medicine, inasmuch as since that time no system or so-called school has gained in Great Britain any large or permanent band of followers; even Brunonianism did not succeed in this respect. This form of conservatism is a characteristic of the British race. But while schools have not risen, individuals have formulated hypotheses or doctrines that at least attracted attention, if not followers. For instance, John Mason Goode (1764–1827) formulated an intricate nosological arrangement in his long-popular text-book entitled "The Study of Medicine," and arranged a classification of diseases now almost forgotten.

In 1816 Sir Charles Bell (1774–1842) made the memorable discovery that the posterior roots of the spinal nerves preside over sensation, and the anterior over motion; and this attracted anew the attention of English physicians to the nervous system, and was rewarded by the later discovery of reflex action or reflex phenomena, communicated to the Royal Society in 1863 by Marshall Hall. Both discoveries were important, and both were duly rewarded by yet others.

Benjamin Travers (1783–1858) seems to have been greatly influenced by the first of these discoveries, and led thereby to pay special attention to what he termed "constitutional irritation;" his studies on this subject are often quoted to-day and are well worthy of perusal; he understood by this term a process (in strong contrast wi h inflammation) which subsides without hyperæmia and without plastic exudate, but which on the other hand may occasion liquid products and result in neoplasms.

Contemporaries of Travers were: Abram Colles; John Cheyne (1777–1830), of Dublin —who wrote on Diseases of Children and described "Cheyne-Stokes respiration;" William Stokes (1804–1878), also of Dublin, who distinguished himself in 1857 by a great work entitled "A Treatise on the Diagnosis and Treatment of Diseases of the Chest;" Robert Graves (1797–1853), professor of medicine in the King's and Queen's College, Dublin, who published clinical lectures of his own, besides many clinical reports in connection with Stokes. Graves was one of the first to oppose the "absolute diet" of the earlier physicians in the management of febrile maladies, and requested that his epitaph should have but one line—"He fed fevers!"

"The School of Natural Philosophy" was the title applied to a system which in Germany ran parallel with that of Broussais, being the legitimate outcome of the medical philosophy of the eighteenth century which had originated there, and also a revival of opposition thereto on the side of realism. It led into speculative extremes, which finally sobered down because of the meaningless scholastic phrases often introduced, and thus broke a path for the subsequent enthusiasm in behalf of French positivism in medicine. Those who constituted this school were for the most part men of importance, but were followed by a number of imbecile representatives. Use was made of the abstract doctrine of the philosophy of identity and the imponderables, such as electricity, mechanical forces, and magnetism, contrasted with which were the dimensions of matter and certain qualities like sensibility, irritability, etc. Perhaps the greatest influence of this teaching was in the department of embryology and physiology, where Johannes Müller displayed his remarkable activity. Among the most distinguished representatives of the natural-philosophy school was Oken (1779–1851), of Bavaria, who subsequently taught in Munich, Jena, and Zürich, and published a large work on natural history which did much for the popularization of this science: he explained that the skull is made up from a series of vertebræ; also discovered the Wolffian bodies, and was such a power in his way that Agassiz characterized him not only as "a master in the art of teaching," but as "a courageous and ruling spirit." Others of this school were: Von Walther (1782–1849), eminent as a surgeon; Dollinger (1770–1741), of Bamberg, the distinguished leader of the Old Catholics; Reil and Prochaska, anatomists; Troxler and Schelling, philosophers and anatomists; Treviranus, the microscopist; Malfatti, Kilian, Spindler, Schmidt of Vienna, and others too numerous to mention.

As a successor to the school of natural

philosophy came The School of Natural History (1831–1850), which made important concessions to realism; its most prominent members were from South Germany. This school was based partially upon the philosophy of nature, and expired almost suddenly. One of its most eminent exponents was Krukenberg, whose therapeutic creed was that "Physicians should be filled with pious reverence toward nature; the organism is a whole, and must be contemplated in this sense; medical art is undoubtedly capable of decisive action, but let us not mistake that in many cases its activity is quite superfluous, in very many null and inadequate, and in many injurious." This school was the expression of the turn medicine was compelled to take in order to escape the after-effects of the one-sided, ideal, systematizing tendency of the eighteenth century (whose final outcome was natural philosophy), and to square itself with the realism and positivism of the nineteenth.

Schönlein (1763–1874), of Bamberg, outlined a system that taught pathological and anatomical revelations as concrete expressions of the independent entity disease, whose relation to the organism is as that of a parasite sojourning temporarily in it; he also constructed a classification of diseases, something after the manner of the botanical classification of De Candolle. One of his best known pupils was Canstadt (1807–1850), whose *Jahresbericht* has preserved his name. Siebert, of Jena, famous as a diagnostician, and Haeser, the medical historian, belonged to this school.

An offshoot of the French school of pathological anatomy and diagnosis was the so-called New Vienna School, which aided the French system in obtaining high recognition in German medicine, and gained its first influence from the labors of Wünderlich (1815–1857); next to whom should be mentioned Baron Von Rokitansky (1804–1878), a Bohemian, one of the most famous men in modern times, and who exercised a profound influence even in foreign countries, particularly in Italy and Russia. Von Rokitansky worked for a long time in miserable quarters in Vienna, but finally a magnificent building was specially erected for him. He was loaded with honors, and took his seat in the Austrian House of Deputies. Two sons are well known in medicine to-day, and two more have achieved reputation as singers—a circumstance which the father embodied in the *bon mot* that "two of his sons howled and two of them healed." He transplanted into Vienna the tendency of the earliest pathologico-anatomical school, which captivated all by its novelty and interest, and in the post-mortem room and the clinical-lecture room he converted medicine in Germany to the realism of the nineteenth century. He was indeed the Van Swieten of Austria in his influence upon educational affairs. His works are distinguished by simplicity, clearness, and logical order. He performed more than thirty thousand autopsies; for fourteen years studied the defects of the septum of the heart and the comparative anatomy of the uterus and genito-urinary organs, yet paid little attention to the microscope or to applied medicine. He was a pathologist pure and simple.

A friend and co-laborer, Skoda (1803–1881), also a Bohemian, was little if any less famous. In 1839 he gave to the world his famous work on Auscultation and Percussion; in 1847 became professor at Prague, and was the first man to lecture in German. In spite of his bachelor peculiarities, his taciturnity, and his heedlessness, he was very popular and left a fortune, quite in contrast to Rokitansky, who died poor. His scientific merit was based upon the fact that he overthrew the specific and pathognomonic arrangement of sounds as taught by the French, and substituted therefor a category based upon the physical constitution and shape of organs and tissues. He endeavored to develop a strictly scientific system of physics out of the empirical French doctrine of physical signs, and in his work on Physical Diagnosis he displayed an independent spirit, though as one who had received his impulse from France. He was the first in Germany to insist upon the merits of Avenbrugger, and was the leading diagnostician of his time of the new Vienna school. Skoda was the first for whom was created in Vienna a specialty after the French model—that is, a special division for patients suffering from thoracic diseases. Great as he was, we must yet lay it up against him that through his influence, first in Vienna and afterward

throughout Germany, practical medicine degenerated into simple diagnosis, and that, by his observations on the natural course of disease undisturbed by therapeutics, he became the founder and exponent of expectant or nihilistic therapeutics—the harbinger of a very cheerless period in the history of medicine.

(*To be continued.*)

HYSTERIA, DUE TO ADHESIONS OF CLITORIS.*

BY DOCTOR G. G. GORDON.

The clitoris, though an organ of very modest dimensions, seems capable of, at times, inducing a train of exceedingly disagreeable and annoying symptoms. As a source of suffering it seems to have received little attention from pathologists, while anatomists and physiologists treat of it very briefly.

In September last I was called to a young lady, twenty-two years of age, suffering from an attack of hysteria. She was not violent, but evincing alternate attacks of laughter and crying, and resolutely refusing to allow any one to touch her; her mother declared that if interfered with she became worse, and frequently passed into an unconscious or semi-conscious condition, simulating catalepsy, but really ecstatic, which might persist for an hour or more. At this time I experienced no difficulty in affording relief, and left the patient in a comfortable condition.

Summoned again the following day, I found her ecstatic, and the unconscious condition was with difficulty overcome. I now questioned the mother as to general health, disposition, and habits, hoping to educe some data whereby the *cause* of these attacks could be made evident. It seems they began almost simultaneously with establishment of the menses—had existed, in fact, since her sixteenth year. The monthly flow was regular and normal, so far as could be determined, but the young woman about the time of puberty received a severe mental shock through an attempt to abduct her—an attempt that failed and apparently induced no worse injury than fright. She was disinclined to go out into society, of rather irritable disposition, and at times quite willful and perverse. Her associates had always been of good character, and she kept good hours, etc.

I suspected, from certain remarks, coupled with peculiarities of the patient, that she might be addicted to masturbation; but the mother considered this impossible, as she had early warned her daughter against the vice, and had always found her most truthful; she admitted, however, the girl had been inducted into the habit during her tenth year, having been taught it by girls at school, but it had been abandoned owing to the sensible measure of the parent. Later I had an opportunity to question the girl herself, who spoke frankly and apparently without any reservation. She denied masturbation, except during her tenth year as just noted; referred her difficulty to some trouble about the vulva, which had persisted since early girlhood, and possibly might have arisen from an accident she described as having injured her severely—while attempting to walk a fence, she fell astride on an inch board. It was impossible for her to ride a bicycle, and even the motion of a street-car was sometimes so irritating that she was obliged to leave the vehicle lest she should have one of her "fainting" (ecstatic) seizures. The sensation induced was referred to as one of pain, though I was also able to elicit evidence that at times it was accompanied by orgasm.

I still believed her the victim of vice, but was forced to admit she did not shrink from discussing the subject, in the way usual to such unfortunates. Neither did she object greatly to digital examination, but rather expressed a willingness to submit to anything within reason that would afford assurance of relief, as the condition was very annoying even when it did not induce the ecstatic state, and debarred her from social privileges, since excitement either of pleasure or anger was often sufficient to bring on a "spell."

On making examination of the external genitals, with an attempt to separate the labia majora, I was cautioned to be very careful lest pain be induced, which I now found was referred to the vicinity of the clitoris. Next it was discovered the labia minora were firmly adherent to this organ and almost

* Read before the Wayne County (Mich.) Medical Society.

completely covered it. The parts were all exquisitely sensitive, and I obtained definite evidence that the whole trouble lay with the clitoris. I now applied cocaine solution to the organ, and endeavored to separate the adhesions, but in vain, and so deferred further procedures. But this examination brought on a recurrence of her troubles, and for a number of days she demanded a great deal of care, and her ecstatic periods were more frequent and more prolonged.

After the patient had somewhat regained her normal condition, with the assistance of Doctor Sprague and an anæsthetic I loosened the adhesions between the clitoris and lesser labia. From this time out I was gratified to see rapid and permanent improvement that has persisted up to the present. The patient expresses herself as now feeling "perfectly well:" she rides a wheel, goes into society, has no evidences of hysteria whatever, and indeed seems quite another person. It is perhaps unnecessary to say that I no longer hold the opinion that she was addicted to masturbation.

And thus a seemingly trivial operation has restored this patient from a condition of almost constant torture to one as comfortable as that enjoyed by any one of her associates.

Now the query which is uppermost in my mind is: How common are these cases? Was this a rare one? We naturally look for analogous conditions in boys; therefore does it not behoove the practitioner to be more particular and likewise suspect them in girls? I am now inclined to believe I have overlooked this condition in several of my female patients. I have also observed that adhesions of the same nature are by no means markedly uncommon among married women. Does the marital state tend in any way to alleviate or mask the symptoms in such cases?

Detroit, Michigan.

WORDS OF WISDOM.

"Original thinkers in the medical profession are generally disregarded by the majority of their fellows. It is the determined and energetic *claquers* with tongue and pen who usurp first place and stir up the greatest amount of vulgar admiration."—Geo. B. Willson, M.D., F.S.S.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the Medical Age, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., MAY 10th, 1895.

Editorial.

COCAINE INEBRIETY.

It is but recently that this form of narcomania has found place in our nosology—so recently, in fact, that the profession at large are very much at sea regarding it, since reliable reports are few and far between, and the habit is very likely to be complicated with some other, such as the taking of morphine, excessive indulgence in alcohol, etc.

Doctor Norman Kerr, who easily stands foremost among authorities on inebriety and narcomania, in his latest work mentions for the first time the Cocaine habit, remarking *en passant* that in his experience it is comparatively rare and for the most part confined to members of the medical profession. *Per contra*, a recent writer in the *Bulletin of Pharmacy*,* writing from the standpoint of a pharmacist, seems to imagine the habit is much more widespread than has heretofore been considered, that it is continually increasing, and that its growing prevalence is largely due to the greatly reduced price of the drug. He also remarks that it is a pernicious habit among a certain class of pharmacists to offer "Cocaine when asked for something that will relieve toothache, neuralgia, and countless other aches and pains; that in some way the erroneous notion has come to prevail that in treating the morphine habit Cocaine is of great value in counteracting the effects of the former drug." "Proceeding on this principle, numerous quacks have claimed ability to cure the

* Albert N. Doerschuk, Ph.G.

morphine habit, . . . but in its stead the patients become cursed with a vice far more ruinous than all their former ills. . . . To use Cocaine to cure the morphine habit is like jumping from the frying-pan into the fire."

Certain it is, the Cocaine habit is the most seductive and terrible form of inebriety—the pleasant elation which the drug induces, and the apparent absence of unpleasant sequelæ that accrue to other forms of narcomania, lead to rapid destruction of the mental powers. Numerous cases of fatal poisoning by Cocaine have been reported in current medical literature, but the number of known Cocaine *habitués* is very few—perhaps because unrecognized or, as before mentioned, complicated with some other form of chronic intoxication.

If it is true that both the medical and pharmaceutical professions are responsible for the spread of the Cocaine habit, owing to the freedom with which this most potent and treacherous narcotic has been prescribed for the relief of pain, it is certainly imperative that there be thrown about the sale of this drug restrictions which alone can be formulated and carried out by these professions, without any reference whatever to measures employed by the State.

That many of the victims are themselves medical men, is undoubtedly true; the remainder are for the most part made up of women and *litterateurs*. Doubtless pain has recurred after the soothing effect of the first use of the drug has passed away, and the same handy and charmed remedy is again had recourse to without any knowledge of the results that are certain and swift to appear. Thus the craving, beside which the fascination of morphine and opium is infinitesimal, has been acquired, and the victim awakes to the fact that he or she has become bound fast to a habit entirely unsuspected. In a few cases there is evidence that herculean effort and iron will have succeeded in effecting a deliverance, but unfortunately such instances are most rare.

It would appear also that in some instances the Cocaine habit has been acquired through the ignorant employment of a prescription by the physician as a succedaneum to opium or morphine, or for the relief of some teasing malady like vaso-motor coryza (hay fever). Nothing can be more disastrous than the substitution of Cocaine for some other drug, since it is considerably more speedy than any other narcotic in displaying its characteristic effects, and quicker in securing an abiding mastery over the taker; the stage of exhilaration being more pleasant than that of morphine or opium, the drug is on this account also correspondingly more dangerous. Inebriates may indulge to most pernicious extremes in strong spirits for years without apparent mischief; some are even able to carry morphine narcomania to almost incredible lengths ere the drug manifests its deleterious qualities upon the physical and mental organism; but, *per contra*, the mental decay and moral perversion of Cocaine excess quickly appear and as speedily increase in intensity. In some instances where the drug has been employed subcutaneously several times daily, an insane condition has developed leading to crime and to suicide; indeed, the Cocaine *habitué* is always insane, and not infrequently a "raving maniac." There is also, under the influence of this drug, less sense of time than from any other narcotic, though all substances possessed of anæsthetic properties seem to have a disturbing effect on the mental capacity.

While Cocaine raises the temperature, its effects are much more swift and short-lived than those of morphine, while its tendency, in excess, is always toward delirium and raving madness. In fatal cases stupor and coma follow, with convulsions and paralysis of respiration—or, as Mosso and Kerr put it, "tetanus of the respiratory muscles."

That Cocaine acts chiefly upon the central nervous system, first stimulating and then paralyzing, is manifest; it contracts the peripheral blood-vessels. Under its use there is at first, usually, increased mental and bodily vigor, which speedily gives way to intense mental depression along with anorexia, insanity, hallucinations, and complete breaking-down of the mind, with volitional palsy and inhibitory prostration, all taking place in a much shorter time than the mental degeneration and physical decadence of alcoholism —in fact, demanding in many cases only as many weeks as alcohol inebriety requires years.

The peculiar overwhelming danger of Cocaine addiction undoubtedly lies in the fact of the comparative absence of immediate after-effects. For some time at least—always, we might say, where the drug is partaken of in only limited quantities—"there is no *arrière gout;* no unpleasant taste in the mouth next day; no dry tongue; no nausea or morning headache; the pleasurable flow of happiness which seems to have left 'no sting behind' has indeed been a 'rose without a thorn.' Thus, deadly to all that is noblest and manly, to all that is 'lovely and of good report' in human kind, this speediest of brain disturbers threatens to excel all other mind poisons in its fell sway over the intellect and conscience of man." (Kerr.)

The drug is usually taken subcutaneously, and the doses frequently follow one another in rapid succession. Taken, as it doubtless frequently is, along with or after some other narcotic, it greatly complicates any attempt at alleviation of the latter. Doctor Mattison, of Brooklyn, has reported a number of interesting cases, as have likewise Erlenmeyer, Kerr, Connolly, Norman, and others, and all unite in the opinion that if taken in time the incipient form of Cocaine inebriety is quite easily relieved, but that the habit once confirmed is most intractable. Kerr declares one of his cases consumed thirty grains of Cocaine daily; the writer personally knows of an instance where three times this amount of the drug was daily consumed; and yet one-seventh of a grain has been known to prove fatal to a stout, healthy man.

As regards treatment, there can be no dispute. It must be both mental and physical, and, like the treatment of all habits, is seldom of any utility except when carried on under complete and definite restraint.

THE DISCOVERY OF HELIUM.

At the annual meeting of the Royal Chemical Society, Professor Ramsay announced that in his endeavors to discover a compound of argon he had experimented with a rare earth, said to yield nitrogen when acted upon by sulphuric acid. Instead of nitrogen, argon was evolved, but associated with it was some strange gas that turned out to be *Helium*, the lightest of all the possible elements, whose existence, apart from the demands of chemical theory, had only been inferred from the solar spectrum. It is the first of all the elements, for below this comes the hypothetical "protyle"—that preëlementary cosmic stuff from which all the elements are supposed to have condensed.

Although this small quantity of helium was so recently found, its existence has already been confirmed by Professor Crookes, who identified its spectrum. A more remarkable vindication of chemical theories than this it would be difficult to find, since the hypothetical or celestial helium was first detected twenty-seven years ago by Messrs. Norman Lockyer and Frankland in the course of a spectroscopical examination of some tongues of flaming gas that became apparent during a complete solar eclipse. These spurts of flame were often 100,000 miles in length, and were shown to consist mainly of glowing hydrogen and an unknown substance.

The terrestrial helium found in the Swedish mineral *cleveite* was discovered as a variety of uranimite, containing uranium, lead, and some of the rarer earths. It is not a little curious that Professor Ramsay should have discovered both of the new elements, argon and helium, side by side in cleveite. Altogether, England may congratulate herself upon the two most brilliant discoveries that have been made of late years in the most exact and progressive of sciences, modern chemistry.

"BESIDE THE BONNIE BRIAR BUSH."

A work of which in a few weeks 50,000 copies have been issued, can hardly fail to have secured many medical readers; and those who have not perused Ian Maclaren's superlatively interesting volume should not fail to do so. Full of tender pathos and rich character-sketches, such a book as this will continue when present-day novels shall have been consigned to everlasting oblivion.

For the depiction of William MacLure, a Scotch practitioner, a man blunt in manner but ready in resources, and getting little or no pay beyond the gratitude of the poor glen folk, the medical profession are under great obligations to the author. Appreciative is the testimony rendered to a member of the section of our profession which is, perhaps,

the hardest worked and most ill requited in cash. There are many word-pictures of the life of this interesting man who "did his best for the need of every man, woman and child in this wild, straggling district, year in and year out, in the snow and in the heat, in the dark and in the light, without rest, and without a holiday for forty years."

The graphic description of the treatment of pyrexia by cold baths is particularly fine, as well as the account given of the subsequent delight of the good doctor at the recovery of his patient.

No medical man possessed of a soul can read this work without being made better morally, mentally, and professionally.

PUZZLES FOR MEDICAL MEN.

Why, in lead palsy, are only certain muscles of the arm affected?

If menstruation depends on the ovaries or Fallopian tubes, how can be explained those cases where menstruation occurs after complete removal of both tubes and ovaries?

What is Addison's disease?

What is hæmophilia?

These, and numerous similar questions, are continually asserting themselves and awaiting full explanation!

EDITORIAL NOTES.

Medicine.—

This is the title of a new medical monthly magazine that has made its appearance upon our exchange table, and which we most heartily welcome. It is the result of the enterprise of Mr. Geo. S. Davis, the well known medical publisher, ably seconded editorially by Doctor Harold N. Moyer, of Chicago, and a staff of expert collaborators and contributors, representing the foremost and best medical talent of the Northwest. *Medicine*, moreover, is representative of no college, clique, publishing house, or manufacturing concern, but is merely a high-class cosmopolitan medical publication. Such names as Moyer, W. L. Baum, D. A. K. Steele, Hobart A. Hare, G. F. Lydston, W. S. Christopher, S. S. Bishop, N S. Davis, Jr., J. B. Herrick, G. H. Weaver, H. T. Patrick, M. D. Ewell, Henry Gradle and Norman Bridge associated therewith give abundant assurance of character for the future. The April number presents original articles on "Herpes Zoster Gangrenosus," "Sarcoma of the Kidney in Children," "Cardiac Sedatives," "Prostatic Tuberculosis," "Medical Septicæmia," and "Effects of La Grippe on the Nose, Throat, and Ear." A notable innovation, one we heartily commend, is the absence of "editorials," since it is to be presumed the editor will give expression to his opinions in direct personal contributions.

A journal of such complete independence and high literary standing as *Medicine* has long been needed.

Strychnine and Snake Poison.—

Surgeon-Captain R. H. Elliot, of the East Indian Medical Service, has recently reinvestigated the value of Strychnine as an antidote against snake poison in the most thorough manner, and corroborates the inefficiency of the drug. He experimented not alone with the cobra, but with the venom of that much more dangerous reptile, the *Daboii Russelli* (or *tic paloonga*), and also with that of the krait, employing frogs, lizards, ducks, fowls, hares, guinea-pigs, dogs, goats, pigs, and monkeys. The results accruing to the investigations of Surgeons D. D. Cunningham and A. A. Kanthack, indicating that Strychnine is in no sense an antidote against snake poison, are fully upheld.

In view of the physiological problems which present themselves and practically block any possibility of an antidote being discovered, the conclusion arrived at by Doctor Elliot was one already foregone. The problem is to rehabilitate disintegrated blood-corpuscles, and when this can be accomplished it will be possible to create life anew. The real problem has already been discussed in the editorial columns of THE MEDICAL AGE (1895, page 145).

New Hospital for Women.—

There has recently been opened, by Her Excellency the Countess of Aberdeen, the "Non-Sectarian Samaritan Hospital for Women" in Montreal. The medical staff consists of Sir James Grant, William H. Hingston, A. Lapthorn Smith, H. Lionel

Reddy, and S. F. Wilson—all well known names to the medical profession throughout the world. The hospital is in the healthiest part of the city, on Dorchester street, near McKay.

Progressive Truth.—

The *New Albany Medical Herald* says that the graduate of 1854 is a perfect ignoramus. —THE MEDICAL AGE reminds the *Herald* that the medical graduate requires five years of practice to discover he is an ass.—*Journal of Medicine.*

We may add to the foregoing the aphorism of Plato: "Seven years of silent inquiry are needful for a man to discern the truth, and fourteen years in order to learn how to make it known to his fellowmen!"

Lost!—

More than a year ago the Amick Consumption Cure Company brought suit against Doctor J. R. Reeves, of Chattanooga, for publicly exposing what he claimed to be the fraudulent character of their business. This suit has just been tried in a court of record, and the jury in less than two hours rendered a verdict in favor of the defendant, the costs being taxed upon the plaintiff.

The Thermometer.—

A correspondent of the New York *Medical Times* speaks very disparagingly of the clinical thermometer, a circumstance that brings to mind the fact that in Joseph Price's hospital in Philadelphia the thermometer is never used.

It is notorious that this instrument is often a factor for evil—that too many practitioners *treat the thermometer* instead of the patient.

A Suggestive Error.—

One of our contemporaries, speaking of the city that is its home and birthplace, strangely announces that its "*morality* in the past year has been less than one per thousand." Hard lines!

The Essential in Practice.—

The profession of medicine is one of sacrifice, and he who is not prepared to make it would do well to turn his attention to something else.

Items and News.

The Song of the General Practitioner.—

[*Sung at the Annual Dinner of the Bolton and District Medical Society.*]

He must not walk his rounds for fear his patients think him poor,
And dearly do they love to see a carriage at their door;
And if his horse is fat, "He must have little work to do,"
And if it's lean, the reason is, "He starves the poor old screw."

Should he call upon his patients every day when they are ill,
His motive plainly is, "to make a great big doctor's bill";
If he visits them less frequently—thus lessening their expense—
The chances are he'll be accused of willful negligence.

He must work all day and half the night, and never say he's tired;
For the public look upon him simply as a servant hired.
And should he take a holiday, he'll find, when he comes back,
Some patients have resented it by giving him "the sack."

Concerning money, he must seem indifferent to be,
And folks will think he practices from pure philanthropy.
When we hear about him boasting of the guineas that he earns,
We wonder if they all appear in his income-tax returns.

About his own afflictions he must never say a word;
The notion of a doctor being ill is so absurd!
And when, perhaps from overwork, he's laid upon the shelf,
His sympathizing patients say, "Physician, heal thyself!"

—J. JOHNSTON, M.D., in *The Lancet* (London.)

Worth Investigating.—

We have been informed, on good authority, of a practice pursued by one manufacturer in the making of tablets of the so-called narcotic tinctures (*i. e.*, aconite, belladonna, digitalis, etc.), which, if true, is open to the severest censure. This manufacturer, finding that his tablets of these tinctures stuck together on keeping in stock, adopted a new procedure. Instead of making the tablets contain the tincture in minims, as represented, he makes a fluid extract of the drug, evaporates to a thick consistency, washes with petroleum benzin to remove resin, coloring matter, and benzin-soluble extractive, spreads on plates, dries with heat, and makes up into tablets.

Now, apart from the question as to whether this benzin treatment removes or alters any active principles or not, the fact remains that

such tablets are not what they are represented to be. Instead of being made of tinctures, as claimed, they are made of fluid extracts, concentrated by heat, washed with a solvent that removes certain proximate principles, and then heated to eliminate the persistently remaining traces of benzin, which heat probably modifies, if it does not destroy. the remaining proximate constituents.—*Philadelphia College of Pharmacy Alumni Journal.*

Opium in Gynæcology.—

The medical profession has always been responsible for the opium habit of patients or the laity, by its reckless and indiscriminate prescription of anodynes and narcotics—generally used for the treatment of symptoms; rarely does the routine practitioner make a precise diagnosis before giving opium, if pain is present. Opiates are commonly used without a clear recognition of an indication except that of pain. The opium habit is rarely acquired, except it be antedated by pain or an illness for which some doctor has given morphine or some preparation of opium. There is scarcely a remedy in the Pharmacopœia used so recklessly and ignorantly, and none doing more general mischief—it has always done thrice as much harm as good. In the general practice of medicine, some of the preparations of opium are to be found in about every prescription. The hypodermatic syringe has made thousands of morphine *habitués*, either with the syringe or with the powder alone. The abuse of the drug is much more common in some states than in others. The influence or impress of certain teachers of therapeutics has been wide in certain sections. The very common remark of teachers, "Gentlemen, it is your mission to relieve pain and suffering," has done a world of mischief. Many of them spend days talking over the numerous preparations of opium, without an allusion to the importance of an accurate knowledge of pathology and diagnosis.—Doctor Joseph Price, in the *Quarterly Journal of Inebriety.*

The Criminal Use of Chloral.—

We have from time to time adverted on the necessity for some general legislation to prevent criminals from purchasing deadly drugs, and recently the use of chloral by criminals for criminal ends was made the object of an investigation by the captain of that notorious New York precinct called "The Tenderloin." Having been informed that the so called "knock-out drops" (that have the name of completing the work of alcohol in the operations of thieves who desire to stupefy and afterward clean out their partially intoxicated victims) contain chloral, Captain Pickett sent out a detective to investigate the sale of chloral and other stupefying drugs, and found that it is altogether too easy to purchase. He is inclined to regard the law relating to the purchase and possession of poisons as a weak one, as it does not provide for the detention or punishment of persons having the "knock-out drops" in possession, who may have been arrested on suspicion. He states that the offense is grave enough to make it a felony to the person on whom is found the drug for any unlawful purpose. The druggists who sold chloral indiscriminately to the detective will be prosecuted. A case of death has recently been held to be referable to these "knock-out drops."—*Journal of the American Medical Association.*

The Pasteur Institute and Rabies.—

Without entering into any discussion of statistics of cures obtained by the "Pasteur Institute"—cures that can always be contested, since it cannot be proved with certainty that the subject bitten would in any case have had hydrophobia—it is only *too certain* that the anti-rabic inoculations have induced death in many subjects, with special symptoms that have caused such deaths to be designated by the names of paralytic rage or hydrophobia of the laboratory. Without taking part either for or against the anti-rabic theories of Pasteur, one cannot deny that his unfortunate want of success demonstrates that such injections are not absolutely inoffensive. While we may appreciate the results obtained, no one can affirm that they may not produce others farther remote; we know, too, that the origin of these may also be contested.—*Journal de Médecine de Paris.*

His Parting Benediction.—

A country minister in a certain locality took permanent leave of his congregation in the following pathetic manner: "Brothers and sisters, I come to say good-by. I don't think God loves this church, because none of you ever die. I don't think you love each other, because I never marry any of you. I don't think you love me, because you have not paid my salary; your donations are mouldy fruit and wormy apples; and 'by their fruit ye shall know them.' Brothers, I am going away to a better place. I have been called to be chaplain of a penitentiary. Where I go ye cannot come, but I go to prepare a place for you, and may the Lord have mercy on your souls. Good-by."—*Ram's Horn.*

Suggestions for Medical Societies.—

If disinterestedness were made a requirement of papers read before medical societies, how few papers would be read—how interesting they would be! If the discussions therein were limited to originality of statement, there would be no perverse application of wind, and nervous prostration of the auditory sense would be an obsolete complaint to the auditors.—*The Antiseptic Club.*

Rubbish.—

Under the title of "Photographing the Womb" an exchange asserts that a Swiss physician has described a method of dilating the uterus by means of tents, so that by the use of a mirror a perfect view may be obtained of the interior of the organ. The future of woman is sad indeed, if now her womb must not only be felt of, sounded, and measured, but photographed as well.

Microbic Pathology.—

We have serious reasons for believing that adhesion to exclusive bacillary pathology *does not obtain better results than clinical medicine in the great majority of cases*, and, moreover, compromises the constitution of our patients.—*Journal de Médecine de Paris.*

A "Whopper."—

A St. Petersburg medical journal is responsible for the report that a certain Russian girl, aged thirteen, weighs 280 pounds, is six feet eight inches in height, and measures forty inches around the bust and nearly thirty around the thigh.

Association of Military Surgeons of the United States.—

The fifth gathering of this organization will occur at Buffalo, New York, from May 21st to 23d. The Secretary is Doctor E. Chancellor, 515 Olive street, St. Louis, Missouri.

A Bill Concerning Patent Medicines.—

In several States a bill has been introduced requiring the manufacturers of patent medicines and nostrums to publish the formula on each bottle, box, or package. The measure is a just one.

Cholera Statistics.—

Since 1832, 148,000 persons have died in Great Britain from cholera, 457,000 in France, 351,000 in Germany, 507,000 in Spain and Portugal, 1,118,000 in Austria, and 1,775,000 in Russia.

Book Reviews.

ANNALES D'OCULISTIQUE. Edited by Doctor George T. Stevens. Price, 50 cents; $5.00 per year. The Trans-Atlantic Publishing Company, New York.

The February number contains: "Advantages of Convex Glasses for Distant Vision," by L. de Wecker and J. Masselon; "Formal in Purulent Ophthalmia," by Doctor Fromaget; "False Lenticonus," by L. Demicheri; "Modern Cataract Extraction," by Charles Bell Taylor; "Recurrence of a Hydatid Cyst of the Orbit," by Doctor Torson. There are also Reports of the Ophthalmological Societies of Paris and of the United Kingdom; Medical and Surgical Society of Bordeaux; Clinical Society of London; Medical Society of Berlin; Academy of Medicine of Belgium; Medical Society of the Hospitals of Bucharest; and the usual reviews and book notices.

In may be noted that the English edition of this work is the same for each month as the French, the two being published simultaneously.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia, Pa

"The Lady of Las Cruces," by Christian Reid, is the complete novel in the May issue. "Martha's Headstone" is by Edith Brower. "Effacing the Frontier," by W. T. Larned. "The Heart of the Fire Spirit," by Alvin F. Sydenham; William T. Nichols solves the mystery of "The Ghost of Rhodes House;" David Bruce Fitzgerald tells what happens "On a Shad Float" at this season; "High Fliers and Low Fliers" are native birds, as observed by W. W. Brown; "A Young Corean Rebel" is a story narrated by Haddo Gordon; in "An Artist's Habitat" W. J. Linton describes some of his belongings; George G. Bain writes of "Climbing the Social Ladder" in Washington. The poetry is by Grace F. Pennypacker, John B. Tabb, Clinton Scollard, and Joseph Wharton.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 a year. Harry C. Jones, New York.

"The Good Old Colony Times," by Edward King, opens the May number. "A Feast Day in a Mexican Village," by E. W. Deming; "A Ramble in Old Venice," by Barnet Phillips; "Flowers of the Air," by Lennie Greenlee; "Glimpses of Dream Life," by Ik Marvel; "Pottery of the American Indians," by W. J. Hoffmann; "Technical Tendencies of Caricature," by Henry McBride; "Studio Suggestions for Decoration," by Clarence

Cook; "Phases of the Picturesque in Architecture," by H. T. Booraen; "The Sword of Japan and its Ornaments," by Countess Montagu; and "Primitive Fire Kindling," by Ernest Ingersoll, are the chief papers. The number is especially rich in its illustrations by the ablest artists at home and abroad.

McClure's Magazine. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

Twenty-three portraits of Prince Bismarck, presenting him at every important epoch of his life for sixty years, appear in the May number. The story of the diplomatic manœuvres between England and France for the restoration of Napoleon's remains, and their removal from St. Helena to Paris in 1840, their burial, etc., is told by Ida Tarbell; Ian Maclaren has another story, but it is far from being up to the mark of those heretofore presented from his pen. There is a paper on "Tammany," and "An Interview with Tissandier;" Charles A. Dana writes on "Journalism;" and a new story by the author of "The Rousing of Mrs. Potter," appears.

The New Science Review. Price, 50 cents; $2.00 per year. The Trans-Atlantic Publishing Company, New York.

The contents for April are: "The Elements," by William Crookes; "Autobiographical Notes" (posthumous), by R. A. Proctor; "Genius: The Model for Educational Methods," by W. G. Jordan; "Where the Steamboat was Born," by M. Symington; "The Ether, and its Functions," by G. F. Fitzgerald; "Changes in Spoken English," by A. B. Kingsbury; "Electric Power Transmission," by F. J. Patten; "Railroad Facts and Fancies," by M. Philips; "Operation of the Vibratory Circuit," by J. W. Keely; "The Continuity of Life," "The Unity of Matter," "Notes on the Progress of Science," etc.

The Atlantic Monthly. Price, 35 cents; $4.00 per year. Houghton, Mifflin & Co., Boston.

Conspicuous in the May number is Percival Lowell's first paper on "Mars." Two articles of historical interest are: "The Political Depravity of the Fathers," by John B. McMaster, and "Doctor Rush and General Washington," by Paul Leicester Ford. "New Figures in Literature and Art" has for its subject Richard Harding Davis; Olive Thorne Miller writes of "Tramps with an Enthusiast;" "A Week on Walden's Ridge" is by Bradford Torrey. Fiction is represented by the two serials, "A Singular Life," by Elizabeth Stuart Phelps, and "The Seats of the Mighty," by Gilbert Parker. There is also a short story by Eliza Orne White.

North American Review. Price, 50 cents; $5.00 per year. North American Review Company, New York.

Cardinal Gibbons in the May number writes of "The Preacher and his Province;" Charles Dickens, the younger, of his father; William Harris, of "Elementary Education;" Goldwin Smith, on "Our Situation as Viewed from Without;" Professor A. Vambery, of "Russia and England;" E. L. Godkin, of "Diplomacy and the Newspaper." George S. Boutwell and others discuss the "Income Tax;" D. Vandam continues his "Personal History of the Second Empire;" and the Japanese Minister discusses "The Future of Japan." There are likewise the usual Notes and Comments.

Outing. Price, 25 cents; $3.00 a year. Outing Co., New York.

Outing for May is a delightfully seasonable number, filled, as usual, with wholesome lore of forest, field, and stream. In fiction, too, it offers attractions not to be despised, prominent features being two complete stories—"Chestnuts with a History," by Margaret Blogrove Rudd, and "Old Uncle Vanderveer," by Edgar Fawcett. The first is a pleasant picture of peasant life in the Apennines, while the second is one of Fawcett's typical sketches of social life in Gotham. The editorial and record departments are interesting and complete.

The Century Magazine. Price, 35 cents; $4.00 per year. The Century Company, New York.

The current number has a wide range of interest. Professor Sloane reaches the conclusion of "Napoleon's Campaign in Northern Italy." "The Princess Sonia" is a new novelette by Julia Magruder. Noah Brooks writes of "The Close of Lincoln's Career;" Alexander McArthur of "Rubinstein;" William E. Smythe of "The Conquest of Arid America." Marion Crawford contributes Part VII of "Casa Braccio," and Harriet Preston writes of "Beyond the Adriatic."

Eclectic Magazine. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The current number contains "Evolution of Modern Society in its Historical Aspects," by R. D. Melville; "Acting as an Art," by Henry Irving; "The Manchester School," by

Goldwin Smith; "Lord Randolph Churchill," by Herbert Maxwell; "Among the Snow Mountains of the Tyrol," by A. E. Mason; "The Referendum in Switzerland," by Numa Droz; "Impressions of India," by C. F. Kery; "Tax on Ground Rents," by R. Balmforth; "Nervous Diseases and Modern Life," by Clifford Allbritt. There are also a number of minor papers of great interest.

HOME AND COUNTRY. Price, 15 cents; $1.50 per year. Joseph W. Kay, New York

Among the contributors for May are Inspector Byrnes, of the New York police force, Emil Meyne, Henry Mann, H. C. Burdick, General George B. Loud, and Captain Jack Crawford. The principal subjects discussed are: "The New York Police Force;" "The Vagaries of Child Life;" "Whalers of the Arctic Sea;" "Evolution as a Study;" and "Agrarian Revival." The usual light literature, poems, etc., are not lacking.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

In the May number Herbert Spencer begins a new series of articles; his general subject is "Professional Institutions." The subject of "Fear" is taken up by Professor James Sully in the next of his "Studies of Childhood;" Professor Frederick Starr has an article on "Archæology in Denmark;" and "The Work of the Naturalist in the World" is the subject of a spirited and suggestive essay by Doctor Charles S. Minot.

CHARAKA-SAMHITA. By Avinash Chandra Kaviratna Kaviraja. Price, £3 per year. Published by M. Audit, 200 Cornwallis St., Calcutta.

Part XL loses none of the interest which attached to its predecessors. This work when completed will be the most valuable addition to historical medicine that has ever been published. No practitioner who is interested in the history of his profession can afford to be without this wonderful work.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Company, New York.

The May number appears in an even more attractive cover than the Easter one. It contains as leading features Milton's beautiful May poem, illustrated by Newman; a continuation of the "Fair Women" series; "Artists in Their Studios," by Cooper; "Circe," by Miller; and "The Angora Cat." There are also sketches, short stories, poems, book reviews, and Godey's Fashions.

Therapeutic Brevities.

Treatment of Diphtheria.—This should be directed to:

Assisting the system to eliminate the chemical virus:

Bringing about such a decomposition of the toxic products as will split them up into less harmful compounds.—For this purpose the perchloride or biniodide of mercury is preferable:

Combating the prostrating effects of the toxins, especially on the circulatory system; on this indication cardiac and nervine tonics should be administered:

Destroying the germs of the disease, which embraces local measures.—As a *solvent* of the membrane and to promote healthy granulation of the surface, lactic acid probably stands first. Sesquichloride of iron has long held a prominent though empirical position as a local application; it forms the basis of Loeffler's solution, which he recommends as a local application. In ninety-six cases wherein the remedy was employed, not a single death occurred:

Sustaining the vital powers by stimulants, for which purpose alcohol must be given with no stinting hand.

Post-nasal and nasal diphtheria should be treated on the same lines. When the membrane extends to the larynx, a moist atmosphere is beneficial; but the confinement of a patient in a continuous vapor bath, such as the croup tent constitutes, is much to be deprecated on account of its prostrating effects.

Hypertrophied tonsils, œdematous uvulæ, and adenoid growths in the naso-pharynx, so frequent concomitants of diphtheria, should be removed, if appearing responsible for obstructed respiration. By this means, more severe operations (as tracheotomy) may be prevented, and this not only without risk, but, on the contrary, with every benefit.

Originating in 1852 with Bouchut, who was also the first apostle of intubation, this procedure fell into disuse, and when I reported a case in 1878 it was treated with the same opposition as on its first adoption. It has since received the support of many eminent practitioners.—DOCTOR LENNOX BROWNE, in *Medical Press and Circular.*

Hot Baths in Cerebro-Spinal Meningitis.—The patient, twenty-five years old, at the end of the third week's illness exhibited benumbed sensorium, constant delirium, and persistent opisthotonos. The fever had sub-

sided, but the pulse remained rapid. Reasoning from previous experiences, the prognosis was considered unfavorable. After the somnolence had lasted ten days, it was decided, on account of the low temperature and frequent and small pulse, to employ hot baths. He received during three days twelve baths in all, at 104° F., each of ten minutes' duration, and even after the first bath striking improvement was observed. Gradually the sensorium cleared up, pain and opisthotonos diminished, incontinence of urine and fæces disappeared, the abducens nerve assumed its normal function, and the power of speech returned. Upon discontinuing the treatment, nocturnal headache and delirium reappeared, whereupon three more baths were given, after which all symptoms of disease vanished. I report this to encourage the further trial of hot water.—Doctor Auffecht, in *Die der Gagenwart.*

Cocaine Injections for Enlarged Prostate.—For many years the difficulty of enlarged prostate has been to me one of considerable importance. Castration is probably the least desirable operation in operative surgery—not because of the difficulties or dangers present in the removal of the testicles, but because of the destruction of the virility of the individual concerned. While in search for a remedy short of absolute castration I devised a method that has so far succeeded in two cases; this is, to inject cocaine directly into the testicle twice per week for about two months. There is considerable absorption, and spermatozoa cease to be produced in about six weeks. The patient gets immediate relief from the distressing symptoms of prostatitis and enlargement; the gland gradually shrinks to its normal size; and the finale of the case is recovery, with the power of copulation but absolute cessation of the production of spermatozoa. Is not this better than castration?—Doctor S. E. McCully, in *Medical Record.*

Tubercular Meningitis.—Death in tubercular meningitis is caused not by the development of the tubercles, but by intracranial compression, by cerebral asphyxia. The rational treatment of the disease lies, therefore, in trephining and drainage—procedures similar to those employed with good results in tubercular peritonitis; the operation should, however, be performed before coma sets in. Ord and Waterhouse report a case of tubercular meningitis in a child five years old, in which trephination of the occiput was done six weeks after the onset of the disease. The dura and arachnoid were divided, and a probe and drainage-tube introduced between the cerebellum and the medulla oblongata. The drainage was followed by an amelioration of the severe symptoms. In spite of the fact that the tube was kept *in situ* for seventeen days, and an intercurrent attack of measles developed, the child got well.—Doctor Hirschberg, in *Bulletin Général de Thérapeutique.*

Mental Therapeutics.—The therapeutic influence of credulity raises a not unimportant question in medical practice—namely, how far it is justifiable for the practitioner to go in certain cases in conscious deception of the patient. It may be said that the end to be obtained justifies the adoption of any and every means that can be brought to bear; but the matter has another side to it. A blind belief in the powers of medical art has been transmitted from the days when magic and medicine were almost synonymous terms; and it is questionable whether it is really justifiable to encourage this kind of belief. It is doubtless more difficult often to strengthen the will power of certain invalids than to yield to their credulity, but there can be no two opinions as to which line of action would be of most value to their mental health.—*Medical Record.*

Creosote in Phthisis.—In Creosote we have a remedy productive of much good or a substance utterly worthless and even harmful. To-day it is the one, and to morrow it is the other; but, as a rule, in either instance it is the physician or pharmacist and not the remedy that is at fault. Pure Creosote, properly and systematically administered, is without doubt one of the most reliable and standard remedies in the entire Pharmacopœia; and failure in its use is due to non-employment of a reliable product, or neglect to prescribe a proper method of administration. A pure beechwood Creosote administered in a proper way, as a rule, gives most successful results. —Doctor C. W. Ingraham, in *Medical News.*

Belladonna for Cancer.—A woman, aged fifty, with a swelling in the right breast, which had been noticed for six months and was increasing in size, applied at the Birmingham Hospital. The tumor was hard but movable, situated below the nipple, which was unmistakably retracted. Glands not enlarged, but much pain down right arm. It was decided the growth was cancerous, and that the breast should be removed. Preparatory to the operation, Belladonna was ordered internally, and,

strange to say, in a fortnight's time all symptoms had disappeared and no trace of the tumor was to be discovered.—Doctor Wingfield, in *Monthly Review.*

Inflammatory Earache.—In a very extensive experience in the treatment of inflammatory earache, I have employed Veratrum Viride, four drops in two drachms of equal parts of glycerin and water, as a local application, and do not remember to have once found it to fail to give relief. Over and over again patients have testified to the immediate and positive relief given by these drops. The strength just stated is the maximum—if the Veratrum be used stronger it may aggravate; seven drops to the half-ounce of glycerin-water is my usual prescription.—Doctor Robert T. Cooper, in *Homœopathic World.*

Milk Diet in Typhoid Overdone.—Da Costa thinks the exclusive milk diet is a source of mischief rather than good. It has on several occasions been pointed out that whenever curd can be seen in the motions, too much milk is being given, and it may even indicate that it is not being digested at all. It is best replaced by white of egg beaten up and largely diluted with water; in this way can be introduced any requisite amount of real food, and in the blandest and most readily digestible form; it leaves no solid residue, and can cause neither diarrhœa nor gaseous distention.—*Provincial Medical Journal.*

Ephedra Vulgaris.—Doctor Vestenrijka has studied the therapeutic value of this drug in the Maritime Hospital at Cronstadt and in the Alexander Hospital at St. Petersburg, administering in decoction or infusion. He decides that it possesses some sudorific but very little diuretic power, and in very small doses increases the peristaltic action of the intestines. It has heretofore been accredited as an anti-rheumatic and as a cardiac stimulant, which actions were not borne out by these experiments.—*Vratch.*

Oxalic Acid as an Emmenagogue.—Doctor Baldy declares this drug, like all others, has proved disappointing; although at times apparently brilliant results were obtained, its action is exceedingly uncertain.

An absolute danger is its apparent power to induce abortion; it is therefore necessary to discriminate the class of cases in which it is to be employed—it is justifiable to prescribe only when possibility of pregnancy has been absolutely excluded.—*Philadelphia Polyclinic.*

Corn Smut as an Oxytocic.—Doctor V. Grouzdeff, after an experience with the drug upon eight parturients, concludes *Ustilago maydis* is an efficient oxytocic, devoid of all the inconveniences that accrue to ergot; moreover, that it is indicated in any stage of labor marked by insufficient contraction of the uterus. It produces neither vomiting, nausea, or tetanic convulsions. Dose of fluid extract, ten to twenty minims.—*La Semaine Médicale.*

Echinacea Angustifolia.—Doctor A. L. Hurd writes that, in a case of cerebro-spinal meningitis in a boy aged three years, the only remedy that had any effect apparently was Echinacea given in five-drop doses (of the fluid extract). He also employs the same remedy in typhoid and scarlet fevers, diphtheria, measles, and wherever an antiseptic is required.—*Medical Times.*

Menorrhagia and Metrorrhagia.—

℞ Fluid extract golden seal, 4 drachms.
Fluid extract ergot, 1 ounce.
Strychnine sulphate, 3 grains.
Muriate tincture of iron, 12 drachms.
Elixir or syrup, to make 8 ounces.

Teaspoonful three times daily, after meals.

—*Clinical Record.*

Constipation in Infants.—Doctor Brach, of Frankfort, recommends Cod-liver Oil as the best laxative for nursing infants, to which he remarks, may be added sugar of milk; he prefers to rhubarb, manna, cascara, and other laxatives, but assists with gentle massage of the abdomen two or three times a day, five or ten minutes at a time.—*Times and Register.*

Purpura.—Doctor Cantrell finds that Oil of Turpentine in five-minim doses three times daily gives more relief than the ergot preparations, and that complete recovery results in a few weeks if there are no complications.—*Polyclinic.*

Horse Chestnut for Hæmorrhoids.—Doctor Burlingame, in the Transactions of the Pennsylvania State Society for 1894, declares he readily relieves piles by the internal administration of *Æsculus hippocastaneum.*

Intermittent Migraine.—A case of six years' standing was completely relieved by the administration of one-thirtieth grain Gelsemine with fifteen grains Sodium Phosphate, given three times daily.—*Polyclinic.*

Medical Progress.

On a Delivery-Pan in Use at the Present Time in Spain.*—The writings of Ploss and Witkowsky, and the researches of Doctors Engelmann and Felkin, have shown that a remarkable diversity of practice has prevailed among different races and at different epochs in regard to the position assumed by the parturient woman, and the provision that is made for her comfort.

In the second volume of the latest work of Ploss, edited by G. Bartels, eight different labor positions are tabulated, with the regions and races where they are respectively adopted: these are: Lying: Half-lying or leaning backwards: Sitting: Squatting: Kneeling: Standing: Hanging: Swinging.

Of the provisions made for parturient women in the sitting posture, the most widely diffused was some kind of stool or chair, and many eminent accoucheurs expended much ingenuity in its construction. Kilian gives a list of thirty-one different authors whose names are associated with birth-chairs of various form. Perhaps the most famous of these is the Deventer Chair, regarding which Schroeder tells us that every well plenished bride in Holland was expected to have one as part of her trousseau.

Deventer himself devotes several pages to the description and mode of use of his delivery-chair, and concludes:

"From all that hath been said, it is easy to judge how useful a chair well fitted is for child-bearing; but on the contrary, if ill contrived, only a troublesome lumber, scarce fit for any other use than to burn. This whole chair, with the four doors, and another seat put into a sack, may easily be carried by any man, and is therefore by no means too heavy for the use of cities and towns; and it is a thing to be wished for, that every midwife were furnished with such a chair; and whoever cannot take the proportion from the figure, they may come to my house and see my chair, if a workman can make them one by mine."

Moschion, among the requisites of the laboring-in room, reckons a "*sedile obstetricium, cathedræ simile*," and asks, in Cap. xviii, according to his Latin editor Devez, "*Quale est sedile obstetricium?*" and answers, "*Consuori sedi simile, in quo sic sedet, ut sub sexu habeat foramen in lunæ formam excissum, ut illac fœtus excidere possit.*"

One seems to hear an echo of the ancient author in the earliest work that was published for the instruction of midwives in England, "*The Birth of Mankinde*," by Raynalde, who says:

"Now when the woman purceyveth the matrix or mother to waxe laxe or loose and to be dissolved and that the humors issue foorth in great plentie, then it shall be meete for her to sit downe, leaning backeward in manner upright; for which purpose in some regions (as in Fraunce and Germanie) the midwives have stooles for the nonce, which being but lowe, and not high for the ground, be made so compassewise and cave or hollowe in the middle, that that may be received from underneth which is looked for, and the back of the stoole, leaning backeward, receiveth the back of the woman."

The chair sometimes belonged to an institution; and there may still be seen in the Obstetric Museum of Edinburgh University the labor-chair that was in use last century in the room with six beds in the top story of the Old Infirmary, that was assigned to Professor Young as an obstetric ward. Sometimes the chair was portable and provided by the doctor; such a chair, answering to Moschion's description, was used in Malta a generation ago. One was sent to Sir James Y. Simpson by Doctor Pisani, whose father had employed it in his practice. Raynalde's sentence, which is simply a translation from Roesslin's work, indicates that in France and Germany it was the midwife who owned the birth-stool; whilst in Holland, as appears from the remark I have quoted from Schroeder, it was part of the patient's own furniture.

But whilst many authorities are vaunting the value of such chairs, already in the seventeenth century Eckarth is found, as Ploss tells us, inveighing against them in these terms:

"When one looks at the construction of an agony chair, you see it is a real chair of pain and instrument of torture. When the sufferer should have her best rest, there is a ledge three or, in special cases, four fingers broad; it is little wonder that these poor people break in bits their loins and backs, and faint from the severity of the sufferings. O! cursed contrivance, I say, the infernal *Proserpina* was the inventor of it."

Although seats of various fashions have been described as of wide and long-continued use, I find no mention made of a utensil which is sold in the china merchants' shops in Spain, and used as a seat by women in labor at the present time. Knowledge of this I owe to the kindness of Doctor R. Russell Ross, Medical Officer of the Rio Tinto

*Communicated to the Edinburgh Obstetrical Society, December 12th, 1894, by A. R. Simpson, M.D.

Mining Company in Huelva, in the south of Spain. He had been called in to consult in a difficult case, and writes that when he first saw the patient he "found her sitting on a similar pail to the one sent—her legs wide apart, and a midwife in front on a low stool examining *p. v.* through the aperture in the jar; the waters, blood, etc., being collected in the bottom of the receptacle."

Spanish Delivery-Pan.

The vessel is made of strong glazed earthenware, and resembles entirely the pan of a close-stool, except for the excavation on one side through which the hand of the attendant gets access to the patient's pudenda, and through which the child can be guided forward. It is 11½ inches in depth in the interior, 6⅞ inches in width at the bottom. At the brim it measures 10 inches in diameter, extending to 15¼ inches at the outer margin of the flange, on which the patient sits, and which is 2¾ inches broad. The aperture in the side extends downward for a depth of six inches from the inner edge of the flange, and at its upper end is 5¼ inches wide at the inner margin of the flange.

Doctor Ross has made inquiries of his medical *confrères* in Seville and the capital of Huelva, but has not been able to ascertain from them that mention is made of this utensil in any obstetric work. It is spoken of by the natives usually as *Bacin*, the same designation as is given to a large pan or basin which serves as a close-stool or slop-pail. Sometimes it is called *Recado*, a tool or implement, or *Parideras*.

There seems to be very little known as to the obstetric usages of the Spaniards, else some notice of this delivery-pan would have been taken by the writers to whom I have referred. All that Ploss has to say about Spain is that "the use of the birth-chair came early into Spain through the Arabs, whose physicians certainly introduced it there amongst the people. Perhaps it is still to be found there; at least Hureau de Villeneuvé says, 'The Spaniards often made use of a sort of arm chair open in front.'" But this solitary sentence occurs in an essay on "Labor Among the Yellow Races," in a paragraph which briefly indicates the customs in different countries in Europe, and cannot be taken as authoritative.

For aught we know, the delivery-pan which Doctor Ross saw in use last summer may have been in use in Spain long before the time of the Arabians. However that may be, if the woman in labor were to be put in a sitting posture she would find this simple kind of seat more serviceable and safe from a sanitary point of view than any of the chairs produced by the ingenuity of the master minds in obstetrics of other countries and other generations. — *Edinburgh Medical Journal.*

Pregnancy and Dental Caries.—Dental caries is a disease characterized by molecular disintegration of the normal constituents of the teeth, and is probably more liable to occur during pregnancy; it is caused by the same processes which produce lactic acid which latter in turn decalcifies the enamel and exposes the dentine. There is evidence to prove also that the saliva is more acid during the period of gestation than at other times; which, if true, is probably due to changes in the blood whereby its alkalinity is diminished. The analogy between this and the lithæmic condition is striking.

It is improbable that lime salts are abstracted from the teeth to supply the needs of the growing fœtus; more than enough phosphates are ingested to supply the needs of both mother and child, hence maternal teeth do not suffer from lack of nutrition; again during gestation osteophytes are found, evidencing an excess of lime salts in the system.

Vomiting of pregnancy, while it may to some extent aid, cannot be considered a potent factor in the production of dental caries; neither can neglect of the teeth during pregnancy be proved to be more prevalent than at other times.—Doctor Reuben Peterson, before the Grand Rapids Dental Society.

The Medical Age.

Vol. XIII. DETROIT, MAY 25th, 1895. No. 10.

Original Articles.

HAVE WE ANY MEDICAL FACTS?

BY JOHN R. HAMILTON, M.D., M.C.P.S.

Inasmuch as the practice of medicine is largely composed of anomalies, we are often led to regard the classification of diseases as greatly at fault, and to believe that the earlier teachers were often in error both as to classification and therapeutics.

A few decades since venesection was considered an essential factor in the management of each and every ailment of the human race, to be followed almost as unvaryingly by some of the depressants—antimony, for example; but to-day the demand is for stimulation and general supporting measures. It would now be difficult to point out a practitioner who dares practice blood-letting except perhaps in some rare and special instance. The old time calomel, while it still holds place in the *armamentarium therapeuticum*, no longer serves the purpose of a cholagogue, for which action it was originally extolled. In a case in which cholecystotomy was performed by a medical friend it was found the flow of bile (which was collected for several days) was actually decreased by the administration of mercurous chloride; also that it was greatly stimulated under the use of bismuth salicylate, a drug for which hitherto no such specific action had ever been claimed.

When we look back upon the myriad of new remedies that within less than a decade have become candidates for place in the materia medica, only to shine for a month perhaps and then flicker and die, is it any wonder that doubt succeeds doubt and that the beliefs inculcated at the inception of the medical career are constantly being weakened? Look at the coal-tar derivatives and nitations in their numberless forms and striking nomenclatures! Each and every one has been claimed as a specific, true and absolute, in some form of febrile or nervous disease; and yet all, when put to the test, proved to be either flat failures or of so uncertain and dangerous a character that they can be employed only in conjunction with some powerful heart and nerve restorative. In the near future—indeed, the reaction has already set in—we will be compelled to fall back upon less persuasive but much more safe and satisfactory drugs, such as obtained before these new medicaments made their *début* in the medical world and set all rational therapeutics at naught. Another potent reason for discarding these synthetics and pseudo-synthetics is the prevalent practice of indiscriminate prescribing by the counter chemist—a practice that is so demoralizing and so fraught with danger to the public as to demand special legislation; it is well known these products can only be safely prescribed by a qualified physician, and even then their action requires to be critically watched, yet the percentage marketed through legitimate dispensing methods is known to be but a tithe of the great total of sales.

The arguments employed, *pro* and *con*, regarding the use of alcohol in medicine, are enough to befog the brain of the most faithful student; yet how few medical men can be found who, after a few years of practical experience, would undertake the duties of their calling without the aid of this drug! When we reflect on this and many other questions of like nature that confront us at every turn of life, it must be concluded that, leaving anatomy aside, there are very few medical facts.

On turning to pathology it is discovered that there is an even more marked division as to cause and effect than in therapeutics; and when was added the pathogenic microbe,

confusion seemed to have reached its maximum. Perhaps at no time in medical history could this fact be more fully realized than in the present juncture, when it is found that the most beautiful platform erected by pathogenic bacteriology speedily crumbles before calm and dispassionate investigation. In Germany the Klebs-Loeffler bacillus first saw the light of day, and was claimed to afford certain settlement of all diagnostic disputes; but alas for the theory! the same little microbe is found in a score of maladies other than diphtheria, and moreover is frequently entirely lacking in the latter. So, too, the "cholera bacillus," so-called, is no more pathognomonic of the Asiatic scourge than of every-day rural scabies. We find another example of doubt when turning to a disease more generally prevalent than either diphtheria or cholera, viz., typhoid fever. In this malady, only a short time since the careful physician hesitated before he presumed to prescribe that mildest of cathartics, castor oil; but now, forsooth, it is found, according to the report of a Toronto practitioner, these cases should all be treated by active purgatives at the very outset, whereby the percentage of mortality will be greatly lowered,—I give this statement for what it is worth, but decline to stand sponsor thereto. And so we have a labyrinth of conflicting opinions, all doubtless the outcome of honest conviction and research, but which tend only to more impress the opinion that the profession is deficient in absolute medical facts.

In corroboration of the foregoing divergencies of opinion, I have to dwell on an epidemic of very unique character that occurred in my own neighborhood during the autumn and early winter of 1894. For any parallel to this the young practitioner would search his text-books in vain, as the only approximate classification is a few lines by some author on herpetic tonsillitis, and even here the most striking symptoms are conspicuous only by their absence. This malady at times presented more the signs and symptoms indicative of diphtheria than those of tonsillitis. So prevalent was the epidemic that scarcely a family escaped its visitation. On examining the throat the exudate was generally found so exuberant as to form large patches in the same region of the fauces as the diphtheritic deposit occupies, remaining about the same length of time, and producing in many instances slight hæmorrhage from the nose and throat. There was the same tumefaction of tonsils, swelling of cervical glands, and serous infiltration of surrounding tissues causing enlargement of the neck—of shorter duration, however, than in true diphtheria. In only one case did I see suppuration of the gland in a strumous subject.

The affected children generally had a decided rise in temperature, sometimes to 103° at the evening exacerbation. The pallor and listlessness of diphtheria were largely wanting, although in some cases drowsiness presented itself as one of the symptoms. The difficulty in deglutition, so common to all diseases of the throat, was perhaps more marked, but in most cases the appetite for food was not wholly wanting, and in many the amount of daily nourishment taken was about the normal quantity of health. The color of the exudate appeared to the naked eye to be nearly that of diphtheria, but perhaps not so ashen, and when removed from the throat dissolved more readily. The duration of the disease in most cases was about seven days, and convalescence supervened and progressed much more rapidly than in the more malignant disease. In no instance that I can recall did paralysis present itself as a sequel, the only thing of this character being a hoarseness, or a nasal twang to the voice, that soon passed off.

Of this peculiar form of tonsillitis we must have had in this small town and neighborhood at least one thousand cases, while in the county at large two thousand would probably be nearer the mark; and of this vast number, not one death was ever chronicled that I could discover, either from the disease *per se* or from its sequelæ; in fact, as soon as the dread of the epidemic, with its very diphtheria-like symptoms, had passed off, and it was discovered to be self-limited, many families declined all medical attendance, nursing their sick through the trouble as in ordinary cases of cold or mild bronchitis.

Every practitioner has not the time or appliances to make a culture test, nor the knowledge of the bacillus that would enable him to detect it when made; therefore

during the prevalence of this epidemic, as a matter of satisfaction to himself, one of my medical compeers sent a piece of membrane to an expert in a neighboring city, who promptly reported it harbored the Klebs-Loeffler germ. The case from which this was taken in nowise differed from the others; it made the same rapid recovery, and exhibited none of the symptoms of depression or paralysis, or any other diphtheritic sequelæ. Now if in this case the Klebs-Loeffler bacillus was present—and I have no cause to doubt its presence—we certainly have good grounds for accepting Hansemann's statement, corroborated as it is by a score and more of equally reliable observers, that the so-called diphtheria bacillus is often wanting in true diphtheria, and as often present and harmless in many other diseases of the throat.

The question now naturally arises: Have we this bacillus with us at all times? Does it remain dormant, merely awaiting an opportunity, when the fortress is not guarded, to assert its virulence? In other words, is it always a stealthy enemy lying in wait for the moment when atmospheric pressure is suitable and the vital force of the patient at low ebb, as some pathologists claim of the tubercle bacillus?

In view of the foregoing history of an epidemic, the like of which every medical man must have seen, or something similar in the way of anomalies, we are forced to the conclusion that the most learned of our profession have yet much to learn of diphtheria and its allied diseases, and when the antitoxin treatment has been in use for a few years we may still discover we have only a few medical facts.

When one comes to the practical part of this or a similar epidemic he can readily pardon the young man who calls it diphtheria, who naturally thinks his treatment specific, and wonders at his marvellous success; but unfortunately, sooner or later after this great run of success, he is certain to encounter an epidemic of the genuine death-dealing diphtheria in which he loses every third case, when he will be apt to lay the blame of ignorance upon his teachers and text-books, because neither were sufficiently explicit in the differential diagnosis of diphtheria, and gave next to nothing as to the pathology and treatment of herpetic or follicular tonsillitis—nothing to enlighten him as to whether he is dealing with a simple and harmless case or with one of great dread and danger—in fact, whether he has on hand a case of life or death. While we excuse the younger man for his rashness in pronouncing a disease diphtheria which is not, we can never forgive the more aged schemer who pronounces it diphtheria for a sinister purpose. He sees in it a grand opportunity to increase not only his statistics but his popularity and his purse; by doing so he gets the ear and attention of the thoroughly frightened parents, who have seen (according to their limited sense of vision) just such cases in the family of Jones and Brown during a former epidemic where every third case died, while their present subject's advisor is not losing a case. Such fireworks are, however, generally, and fortunately, of short duration, and the owner is soon only in possession of the rocket-stick; nevertheless he will re-light this when the next epidemic of roseola visits his constituency, which of course will be called "scarlet fever" and treated with unprecedented success.

When we see nosologists, and all medical writers in fact, going to great trouble to give the differential points between diphtheria and scarlet fever—a fact ten times more easily discovered by the student of medicine than the differential diagnosis between the former and the epidemic malady just under consideration—we are again forced to believe that the authors of the future will view diphtheria in a different light than they have done in the past, and not try to convince us (as many eminent men of the British Isles have done) that croup and diphtheria are one and the same disease; in fact, a few good men still cling to that belief. We, of course, who have practiced in this country, think we see such a marked contrast between the sthenic croup and the asthenic listless diphtheria that we wonder at such a conclusion, and wonder more whether we have any medical facts.

Port Dover, Ontario.

LECTURES ON THE HISTORY OF MEDICINE.*

BY ROSWELL PARK, A.M., M.D.

(Copyrighted.)

[*Continued from page 275.*]

A few of Skoda's more eminent colleagues deserve brief mention: Oppolzer (1808–1871) was singularly gifted in diagnosis, popular, a teacher of wide influence, and manifested in superlative degree the characteristics that constitute a truly great physician; he wrote little, but was for a long time professor of medicine at Prague. Von Hebra the elder (1816–1880) worked a complete revolution in dermatology, and developed a classification based upon the pathological anatomy of the skin. He instituted a new and independent line of therapeutics as applied to this branch of our art, for which the medical world will ever hold him in grateful remembrance. Sigmund and Zeissel during the same period did much to clear up the problems of syphilis. To Czermak (1828–1873) and Türck (1807–1868) we are indebted (practically) for the making a specialty of diseases of the nose and larynx; of like service to ophthalmology were Jäger, Jaxtthal, Arlt, Stellwag Von Carion, Hasner, Mauthmer, Fuchs, and Von Reuss, while Gruber and Politzer did as much for diseases of the ear.

An indirect offshoot of the new Vienna school is the so-called "Physiological Medicine," founded by Roser (1817–1888), of Stuttgart (later professor of surgery in Marburg), seconded by Griesinger and Wünderlich. Their views were directed against the symptomatologists and idealists, and particularly against the School of Natural History, the claim being that physiology must include vital phenomena, and from the morbid portions of these phenomena a special science should be formed as an artificial yet practical division of knowledge. Wünderlich's book of therapeutics was for a long time the best guide in this direction, inasmuch as it left to individual thought and judgment—the Hippocratic method of investigation—the determination of value and demand. Another offshoot, that differs but little from this save in definition, is the "School of Rational Medicine," originated by Pfeufer (1806–1869) and Henle (1809–1855), and which, since 1841, has been represented by a special journal. While Wünderlich claimed pathology to be the physiology of the sick, Henle considered this questionable and made no distinction at all between the physiology of the healthy and that of the ill. The language of the followers of this school contrasted strongly with that emanating from other schools, and for a time was confident and ingeniously triumphant; nevertheless it did not forget philosophical speculation, and Hegel may now be regarded as indirectly the godfather of rational medicine.

The vagaries of Paracelsus led indirectly though positively to the foundation of Homœopathy, and likewise originated the doctrine that bears the name of Rademacher (1772–1849). It is curious that this pseudo-Paracelsic system should spring up alongside of the Vienna school, its teachings being the classification of diseases by their therapy. Rademacher's followers possessed three universal remdies, "cubic nitre (nitrate of soda) copper, and iron," and also three primary diseases that must take their titles from the three universal medicaments. In spite of the admission that these diseases were unknown it was boldly asserted they were with certainty to be cured by the three chief remedies. The three primary diseases, "sod. nitrate, copper, and iron diseases," do not necessarily remain as such, as they may throw some organ "into a condition of sympathy" and thus it results that iron disease may express itself in the form of consumption, delirium tremens, etc., while a copper disease may appear as worms, paralysis, jaundice, etc. Beside universal diseases and universal remedies there were diseases of organs, to be diagnosed by the efficacy of organ remedies—thus, abdominal diseases must be relieved by corresponding "abdominal remedies," head diseases with "head remedies," chest diseases with "chest remedies," etc. Also for each particular viscus there must be a special remedy. What is most surprising of this absurd doctrine is that it found followers, some even quite capable in their way.

Now, too, reappeared the Hydrotherapeutic System—the great apostle of which was

*Delivered in the Medical Department of the University of Buffalo, session of 1894–5.

Priessnitz (1799–1852)—based upon gross views of humoral pathology, according to which a disease entity was to be expelled in the form of sweat, eruption, etc. Poultices, cold packs and cold baths were the principal therapeutic measures. Winternitz has made hydrotherapy popular and in a measure effective in the management of certain maladies.

Rudolph Virchow in 1858 instituted the doctrine or theory known as "Modern Vitalism," which in fact was borrowed from natural scientific medicine and distinguished from the vitalism of the previous century in that it breaks up the old vital force, which was supposed to be either distributed throughout the entire body or located in a few organs, into an indefinite number of associate vital forces working harmoniously, and assigns to them all the final elementary principles without microscopic seat. "Every animal principle has a sum of vital unities, each of which bears all the characteristics of life. The characteristics and unity of life cannot be found in any determinate point of a higher organism, *e. g.* in the brain, but only in the definite, ever-recurring arrangement of each element present; hence it results that the composition of a large body amounts to a kind of social arrangement, in which each one of the movements of individual existence is dependent upon the others, but in such a way that each element has a special activity of its own, and that each, although it receives the impulse to its own activity from other parts, still itself performs its own functions." This is nothing but another way of expressing the cell doctrine to which many medical men are now committed, which means that all bodies are built up of cells, and that each cell has a unity and a purpose of its own.

In 1677 Sir Robert Hooke discovered plant cells; later Schwann discovered animal cells, and Robert Brown cell nuclei; but it remained for Virchow to supply the gap which had risen between anatomical knowledge and medical theory—that is, to supply a "cellular pathology," since which time the cell has assumed the rôle which the fibre occupied in the theories of the seventeenth and eighteenth centuries. Time alone can decide as to the ultimate validity of this theory, which has in certain circles been most enthusiastically received. One of its weakest aspects is, perhaps, that the so-called intercellular substance plays an uncertain and unsatisfactory part. An important feature in which the cellular pathology differs from other systems, and particularly from the old humoral pathology, is in the doctrine that the blood itself is not the proper and original cause of dyscrasiæ, and probably not the cause of continuous alteration of the tissues; that these dyscrasiæ arise because the blood is not an independent structure, but dependent upon the condition of the patient in consequence of its continuous conveyance of noxious material from all parts of the body—the blood is therefore merely the medium for the production of the dyscrasia. This theory has made several peculiar, new and symptomatic or morphological forms of disease, such as leukæmia, leucocytosis, etc. Virchow also cleared up the old and obscure ideas regarding pyæmia, and proved that an absorption of pus into the blood, which the name implies, is quite impossible; likewise that pyæmia is inseparable from thrombotic processes.

Virchow was born in 1821 in Pomerania, and in 1849 distinguished himself by attaining the highest grade in the career of the learned, a professorship which he first held in Würzburg. During earlier years his residence and labors were largely the result of necessities arising from political views, for on account of these he was long denied a residence in Berlin. A personal friend, now an old man, an interne in the great Julius Spital in Würzburg at the time when Virchow taught there, tells me a light was burned every night in Virchow's room until 3 A.M. and yet the Professor was always out at work by 7. It was by such intense application that he arrived at his present position at the very top of the professional ladder; but very few men have the physique and constitution to stand such arduous study. In 1856 he assumed the chair of pathological anatomy in Berlin, and introduced microscopic anatomy, to which Rokitansky had not given sufficient attention. Virchow was a former pupil of Johannes Müller, famous as a physiologist and pathologist, and his views to-day are often tinged by the doctrines acquired from this great teacher. He is also a great admirer of Harvey, whose picture, at least for a long time, was the only

one permitted to hang in his study. His first edition of "Cellular Pathology" appeared in 1858; the colossal work on "Tumors" in 1866, in which he carried out the division of morbid growths originally adopted by Johannes Müller in 1838, classifying them according to their microscopic elements. He is also scarcely more celebrated for his teachings and labors than for the number of famous pupils brought up under his influence, among whom may be mentioned Leyden, Reklinghausen, Cohnheim, Waldeyer, Kühne, and Rindfleisch. As a result of his labors has arisen in Germany what has been called the "Medical School of Natural Sciences," that seeks by means of pathological anatomy and microscopy, experimental physiology and pathology, and the other applied methods, to make of medicine an exact science; and to it belong such men as Zeimssen, Gerhardt, Nothnagel, Liebermeister, Senator, Erb, Vogel, and others. An offshoot from this is the so-called "Munich Clinical School," to which belong Von Buhl, Pettenkofer, Seitz, and Oertel.

The splitting up of medicine into specialties, and the increase of its subordinate branches into schools so-called, resulted in great danger to the unity of medical science. A return to the methods which combine science and practice, the so-called clinical-practical method, is again sought by men who have established the well known *Zeitschrift für Klinische Medicin* under the management of Frerichs and Leyden—a journal which has already done a great deal of good.

The versatile Bouchut, of Paris, has recently published a theory, the so-called "Seminalism," for which the claim is made that he grants nothing to hypothesis and everything to observation; its characteristic is that this new theory is also vitalistic—in fact, the French have scarcely ever brought forth any other than vitalistic theories. Bordeu and Barthez, during the previous century, created the first French theory, which was followed by Bichat and later by Bouchut, who as a matter of fact owes much to Bichat. Bouchut teaches that beasts have an intelligence of instinct, and men one of abstraction; no beast oversteps the limits of animal thought, which is separated by an abyss from the productive thought of men; there is a proper kingdom of man in accordance with his special nature; also that the vital forces of men and of beasts are entirely different from each other, and that the principle of physical identity remains in the bodies of each, since the constantly renewed mass is formed in exact accordance with the original plans; in all the changes of his elements man is identical with man; all internal and external causes of disease modify more or less the vital force and its impressibility in the fluids or at some point in the economy, either increasing it or diminishing it. This theory, published in 1873, claimed "in the abstraction of its promise and completeness of its conclusions to yield to none of its predecessors." Yet even in France the task of transforming medicine into a natural and exact science is far from being a *fait accompli.*

The most recent theories of disease are the result of microscopical study of germs—the germ theory, in fact—and stand in the closest possible relation with the doctrine of spontaneous generation, fermentation, miasm and contagion. In 1838 Ehrenberg regarded infusoria as animals, but Dujardin in 1841 expressed doubts, and Perty in 1852 affirmed that most forms classified as infusoria should be asigned to the vegetable kingdom, where a little later Naegeli relegated them. The correctness of this conclusion was proved by Cohn, who also perfected a classification. This particular form of investigation began in the twenties of the present century, and assumed its present direction in the thirties and forties. Gaspard, in 1823, renewed the experiments of Haller and injected into the veins of animals not alone putrescent material, but the blood of other creatures suffering from the effect of such injections. Bassi in 1835, discovered the cause of silkworm disease, thereby giving special impulse to the theory of parasitism, and this was quickly followed by evidence of the existence of both vegetable and animal exciters of disease. Shoenlein in 1839 demonstrated the fungus of favus; Vogel discovered the *oidium albicans* in 1840; Goodsir the *sarcina ventriculi* in 1841; but the greatest influence upon the development of the parasitic or germ theory was the sequel to the discovery of the anthrax bacillus by Davaine in 1850. In 183

Latour and Schwann demonstrated that the cells which were known even to Leeuwenhoek were actually vegetable forms, and Schulze had already pointed out that fermentation of fluids could only occur in the presence of extremely minute vegetable organisms; Chevreuil next showed that animal solids remained free from decomposition when protected from the access of germs; and in 1857 Pasteur demonstrated that fermentation and putrefaction were caused, not by chemical forms, as Liebig had taught, but simply by the agency of lower organisms, which he divided into aërobes and anaërobes; and in 1868 Chauveau queried as to whether morbific elements resided in the formed element of germs or in their fluid constituents. Thus the theory of *contagium vivum*, for which Henle contended as early as 1821, was not forgotten. In Germany Klebs and Hueter became the prominent champions of this theory; Hallier had designated his so-called "*microsporon septicum*" and introduced a method of fractional cultures. The views of Klebs were opposed by Billroth, who contended for his "phlogistic ferment" and "*coccobacteria septica*," upon which he wrote an elaborate and extensively illustrated treatise; he also at that time opposed the specific character of the lower organisms as disease agents. Hallier's *microsporon* was refuted by Cohn, who studied and classified the various fungi and distinguished between the pathogenic and the septicogenic—that is, those which produced disease and those which produced ordinary putrefaction. Then came the experimental evidence of Davaine and Koch, who demonstrated the development of bacteria from spores. It is hardly necessary to discuss this theory further, but I may mention the labors of Panum and of Brieger, who deeply investigated the poisons produced by bacteria, to which are given the general titles of ptomaines and toxines.

It would be unjust, however, did I not mention the name of Lister in connection with the inestimable benefit that has accrued to surgery from the practical application of the theory of infection to wounds—a measure that brought about an entire revolution in surgery and surgical technique, and an entire reversal of the statistics of operations; where thousands formerly died, thousands now live, their lives being indirectly due to the labors of this one man and his following.

I will add that it is necessary to realize the difference between life and death to appreciate the changes that have been brought about during the last score of years. Much that in former years was unjustifiable has become both justifiable and feasible; to-day patients as a matter of course live after operations which, so recently as when I was a student, were considered impossible, or if performed exposed the operator to the charge of manslaughter.

I have spoken of the impulse which came from Avenbrugger's invention of percussion, which was greatly extended through the translation of his work by Corvisart (1755–1821); the latter also excelled as a clinical teacher and pathological anatomist, and had much to do with the education of others of his *confrères* whose names are lustrous in history. Among the most celebrated was Laënnec (1781–1826), who, though brought up among most trying surroundings, early manifested a zeal for medicine. He became a field surgeon in the French army soon after the Reign of Terror, and pushed his classical and medical studies with restless zeal. In 1815 his first experiments were made with the stethoscope, the invention of which was due to accident: in order to hear the sounds of the heart more clearly, he one day applied a cylindrical roll of paper, and then immediately constructed the whole form of the stethoscope upon the principle now everywhere resorted to. In 1819 he published his work on Mediate Auscultation—a treatise on prognosis in disease of the lungs and heart, based principally upon this new aid to investigation. The treatise was speedily translated into all the languages of Europe. After enjoying a large practice Laënnec succumbed to ill health at the early age of forty-five. He seems to have had but slight appreciation of his own services to medicine, and to have prided himself rather on his skill in riding horseback. Honor and fame, however, followed closely upon the publication of his well known work, and the manuals of physical diagnosis which now find frequent mention in book catalogues and come from various and wide sources are the legitimate outcome of Laënnec's pioneer treatise.

A versatile French writer who devoted especial attention to medical nomenclature was Piorry (1794–1879), to whom we are indebted for the pleximeter. The double stethoscope, a legitimate extension of Laënnec's simple instrument, was invented by Cammann, of New York, and can justly be claimed for American medicine. Other methods of physical examination, like spirometry, chest measurement, and study of expired air, have been introduced since 1846. The ophthalmoscope, which has been of such sterling service, and is based upon the simplest of principles, was the invention of the famous Helmholtz, but just deceased. The principle of endoscopy—the illumination and visual examination of the various cavities of the human body,—the various specula, the spectroscope, the sphygmograph, the more accurate record of physical sounds, the application of electricity, and the employment of thermometry, represent a few of the strides in the medical science of the present century, thereby aiding and perfecting the art of diagnosis, which in turn must ever necessarily form the basis for all rational treatment. Let no one complain that we are still so far from certainty in every case; the wonder is that so much has been discovered in so short a space of time.

Wonderful as have been these advances, the greatest achievements have accrued to the department of surgery, which Chamisso terms "the *seeing* portion of the healing art." The sixteenth century opened the way for checking of hæmorrhages; the seventeenth accomplished great simplifications and improvement in the way of dressing wounds; the eighteenth gave a refining and elevating tendency to the study of applied practice, and raised surgery to a level with other branches of science; and now the nineteenth century has, toward its close, made surgery as nearly, perhaps, as it ever can be, an exact science, to which every other branch of science has been made contributory. The chain-saw, invented in 1806 by Jeffery, alone gave an impetus to resection, which was cultivated especially in Germany; to resection was added osteotomy by Heine and Mayer; this in turn was succeeded by the so-called subcutaneous osteotomy of Langenbeck in 1854; Stromeyer introduced subcutaneous tenotomy in 1831, which was a very pronounced advance on all that had gone before; then came the introduction of anæsthesia, by which were made possible operations that had been beyond human endurance; by the introduction of the rubber bandage by Esmarch in 1873, bloodless methods were made possible. Pain and hæmorrhage, the two greatest enemies of the conscientious surgeon, being thus almost annihilated, there was left but an apparently theoretical limit to what the surgeon might accomplish. Orthopædic surgery, introduced by Delpech, was unknown prior to 1816; it was first practiced systematically by Stromeyer and popularized in France by Guérin. Operations on nerves were studied as special methods by Schuh, Werhher, and Nussbaum. Jobert and Simon abroad, and Sims and Emmet in the United States, by their studies of fistulæ peculiar to the genito-urinary tract in females, have conferred inestimable benefits upon suffering womanhood.—So late as 1839 Vidal declared there did not exist in the history of surgery a single well authenticated case of complete cure of vesico-vaginal tear.

It was not my intention to more than barely refer to the living surgeons of to-day, or those who have but very recently passed away from us; but it would be an injustice to overlook Bernhard von Langenbeck and Theodor Billroth. The former, born in 1810 and deceased in 1887, was for a time a teacher of physiology, but subsequently became the successor of Dieffenbach in the University of Berlin. The influence he exerted upon surgery in Germany and (since the decline of French precedence) upon surgery all over the world, has perhaps been greater than that of any one man since Dupuytren's time. He it was that introduced into surgical technique and surgical pathology the experimental method of which Johannes Müller was the great exponent; indeed, the relatively high importance which pathology is given to-day in every surgical curriculum is due more to his labors than to those of any other one man. Genial, learned, indefatigable, he was the ideal accomplished teacher. It would be impossible in any short *résumé* of his life and labors to do justice to so distinguished a man, to whom the profession owes so much. Perhaps the highest testimonial that could be given would be the enumeration of the

men who were ever and always his enthusiastic admirers. Langenbeck was the founder of the German Congress of Surgeons, and for many years its president, and the permanent home this association has built for itself in Berlin bears his name; the surgical journal he founded has now passed its fortieth volume, and is to-day the first periodical of its class in any country or language.

Theodor Billroth, who only within a few months joined the great silent majority, was for many years the surgical sun of Austro-Hungary, around whom revolved all the other lights of the profession in the empire. He was as expert with the microscope as with the knife, and equally great with both. Although his great and elaborate work on "*Cocco-Bacteria Septica*" is now obsolete, it nevertheless marked an era in surgical pathology, as does also his text-book on the same subject, which reached fifteen editions and has been widely translated. He it was who made the first resection of the larynx and of the stomach, and to him we are indebted for many other daring operations. It was the fame of this teacher that in recent years led young Americans to Vienna, and he set the example in every way for a constantly growing number of students whose names are, or ere long will be, famous. Billroth was born in 1819 in Bergen, and succeeded Schuh in Vienna after having taught most acceptably at Zürich. What he was to his teacher Langenbeck, such are the younger German surgeons, like Czerny, Gussenbauer, Mikulicz, and others, to *him*.

Here may be recalled the pride with which Americans greet the name of McDowell, who performed the first ovariotomy, and prepared the way for a branch of abdominal surgery the results of which have fairly astonished the world.

There is much to be said also for certain measures, such as the introduction into surgery of plaster-of-paris, by Larrey; of starched bandages, by Seutin; of absorbable material for ligatures and sutures, the latter from animal sources. Finally, antiseptic—or better, septic—methods of operating and caring for injuries and wounds, have worked a revolution that is in methods and results perhaps the most important known to medical history.

At the beginning of the present century the French appeared to lead in matters surgical, and were distinguished by dexterity in operating, fertility of invention, accuracy of observation, and clearness of clinical teaching. The foundation of this reputation was laid by Desault, and upon it his successors continued to build. From his school descended the barber-surgeon Boyer (1757–1833), who became the first surgeon and trusted adviser of Napoleon, and was by him created a baron. He was the author of a work, in eleven volumes, which has survived many editions and translations, and therein he laid especial stress upon after-treatment. Richerand (1779–1840), like Boyer, was made a baron, and was a professor in Paris; but his character suffered from his overweening ambition and vanity; he was wont to exhibit most unpleasant personal traits, but nevertheless his surgical ability entitles him to front rank among his contemporaries. The third surgeon honored with the rank of baron was Larrey (1766–1842), surgeon-in-chief to the Grand Army, and whom Napoleon I. called the most virtuous of men. In 1772 he joined the Army of the Rhine, and was the physician of the so-called "flying ambulance" for twenty-two years. He was present in sixty great battles (including that of Waterloo) and four hundred engagements, and was three times wounded. His memoirs and monographs on subjects connected with military surgery cause him to be often quoted even at the present day. It is recorded that he performed two hundred amputations in a single day; during the march through Russia he had at one time in Smolensk 10,000 men to care for in one hospital. A wonderful organizer, he was idolized by the soldiers and seems to have been held in nearly the same esteem as his great prototype, Ambrose Paré.

The most famous French surgeon of this century, equally celebrated as a diagnostician, as an operator, and as a teacher, was Baron Dupuytren (1777–1835). As a child he had been stolen on account of his eminent beauty. His early life was one of poverty and want. He zealously devoted himself to anatomy and physiology as foundations for successful work in surgery, and ultimately secured a private practice that embraced all France, and when visiting other countries was received like a prince. For years he

devoted three hours daily to didactic lectures. He died leaving a fortune of several millions of francs; he even offered to the exiled Charles of England a million francs as a trifling recompense for his misfortune. He was known as "The Napoleon of Surgery," a title well earned, yet one which drew upon him the enmity of many of his contemporaries, particularly as he seemed inclined to persecute all who dared to tread in his path. His death resulted from empyema, for which he declined operation, preferring, as he said, "to die at the hands of God rather than man."

The first truly scientific practitioner of orthopædic surgery in France was Delpech (1777–1832), of Toulouse, who was likewise the pioneer in subcutaneous tenotomy of the tendo Achillis and in autoplastic operations. At his own expense he erected a large orthopædic institute in Montpellier, and his death occurred while on his way to pay a visit to this institution, both he and his coachman being shot by an insane patient upon whom he had operated.

Dupuytren's successor in the Hôtel Dieu was Roux (1780–1854), who earned specific reputation as a dextrous and rapid operator; his labors in constructive and plastic surgery were extraordinary. The first to apply physical investigation to surgery was Lisfranc (1790–1847), best remembered, perhaps, in connection with amputation of the foot. Marjolin (1770–1850) was a teacher of eminence, as were also Sanson (1790–1841) and Cloquet (1790–1883), though the latter is better remembered for his works on anatomy than for his exploits in surgery. Civiale (1792–1867) is chiefly famous for revamping the operation of lithotrity, for, though a lithotrite had been invented by D'Etoilles, Civiale was the first actual operator, for which he was fiercely opposed by Larrey, Sanson, Velpeau, and others; he lived to see his rivals confounded, and lithotrity accepted as a legitimate surgical procedure. Amussat (1796–1856) re-invented torsion of arteries for the repression of hæmorrhage, for although this measure had been suggested by the ancients, it was held to be suitable only for very small vessels; he never held a professorship, yet at his residence were gathered so-called "conferences" that were attended by the most eminent medical men of the time; he is specially known in connection with the operation for opening the colon in the lumbar region. Pravaz was a surgeon of Lyons, whose name has been perpetuated by the small syringe, the original hypodermic, which he devised. Vidal (1803–1856), of Cassis, made a reputation by his work on Surgery in five volumes, which was extensively translated and reprinted throughout Europe. Jobert de Lamballe (1799–1867) rose from abject poverty to a professorship and a seat in the Academie; he is particularly remembered for his achievements in plastic operations. Velpeau (1795–1868) in 1834 became the successor of Boyer; popular as a teacher and an author of great fertility, he devoted attention alike to surgery and midwifery; his Operative Surgery, in three volumes, and a treatise on Diseases of the Mammary Gland are still classics. Gerdy (1797–1856), like Velpeau, was the son of poverty-stricken parents; in 1833 he became a professor, and wrote extensively on bandages, dressing, and on operation for the radical cure of hernia. Bonnet (1802–1858) rendered great service to surgery by his researches upon diseases of the joints. Malgaigne (1806–1865), made professor of operative surgery in Paris in 1865, devoted great attention to surgical anatomy, operative and experimental surgery and especially to fractures and dislocations—his work on fractures is met with on many book-shelves to-day. Nélaton (1807–1874) was surgeon to Emperor Napoleon III., and though he wrote little, became peculiarly eminent as a practitioner; his ingenious probe tipped with porcelain, by means of which he located a bullet in the foot of Garabaldi, is well known. He devoted special attention to tuberculosis of bones and joints being, perhaps, further instigated thereto by the case of the Prince Imperial; his treatise on this subject forms most acceptable reading to-day, and he taught the existence of osseous tuberculosis long before such was recognized in either Great Britain, Germany or the United States.

Were I to refer to living contemporaries of many of the celebrities just mentioned, I should speak with special reverence and esteem of Pean, Verneuil, and Ollier, who are to-day the greatest surgeons in France, but with their lives and labors any one may

easily acquaint himself from sources which are at the command of all.

I pass now to the Italians, who since Scarpa's time have never made any very decided impression upon surgery, although there are many most excellent practitioners of the art in Italy; the best known are Porta (1800–1875), Vanzetta (born 1809), and Rizzoli (who died in 1880); Riberi, Tizzoni, Loreta, Durante and others are perhaps equally entitled to mention.

Since the time of Gimbernat there have been no surgeons in Spain whose services have been sufficiently important to rouse special attention away from their native peninsula. The Spaniards are well educated and well equipped for practice, but do not appear as great originators nor experimenters—doubtless because their medical schools and universities long since lost prestige, owing to clerical and Inquisitorial interference; nevertheless Spanish medical literature has kept well abreast with that of other countries.

In Great Britain the example of John Hunter, during the eighteenth century, produced results of the greatest importance; advances were made simultaneously in physiology and pathology which the Anglo-Saxon races have been quick to utilize. While perhaps more conservative and less inventive than the French, the surgeons of England have ever been in the front rank, and quite early they gave great attention to careful local dietetic and hygienic measures of which Continental surgeons were, and are, too often neglectful. English surgeons, too, while they have been specialists, have never been quite so narrow in their respective fields as the Continental surgeons, and it has always been rare to find one who was not also a good general practitioner; the immense advantages which this added knowledge confers must be apparent. The most celebrated representative of British surgery of this century was the son of a clergyman, Sir Astley Cooper, born in Norfolk in 1748, but subsequently a resident of London. During youth he resolutely compressed the bleeding limb of a playmate who was the victim of an accident, so that time was gained for the arrival of a surgeon who then tied the vessel; this decided his future calling, and he pursued his studies in London, Edinburgh, and on the Continent. In 1791 he settled down to private practice, which soon yielded him an income in excess of £20,000 ($100,000), for his day the equivalent of twice that amount at present. At the age of seventy-three he succumbed to a long-standing asthma. He was a somewhat voluminous writer, and his works on fractures, dislocations, and diseases of the breast are by no means obsolete. His motto was: "First observe, and then think." Exceptionally endowed with all the graces of person, he became one of the most popular and influential men of his day; withal, he was always zealous for his profession, never unoccupied, and charitable to a high degree. Of his boldness we have evidence in the fact that in 1817 he tied the abdominal aorta, being the first to undertake this surgical feat.

A colleague of Cooper's at St. Thomas's Hospital was Travers, already spoken of in connection with irritation. Tyrrel, a nephew of Cooper, was a well known surgeon, particularly in diseases of the eye. Others of the same name were: Samuel Cooper (1781–1848), who wrote a voluminous treatise on practical surgery; Bransby Cooper (1792–1853), Sir Astley's nephew and adopted son, who was well known, and who achieved an eminence that is only dimmed by that of his uncle.

Sir Benjamin Brodie (1783–1862) was distinguished as a special investigator and a soft-tissue operator, of whom it is said that, basing his actions upon his statistics, the older he became the less frequently he operated. His best known writings concern disease of the joints. Guthrie (1785–1856), a man of noble characteristics, was the friend and companion of Wellington, whom he accompanied in all his campaigns. Although well known as a lithotomist, his fame rests chiefly upon studies and writings in the domain of military surgery. A colleague of his in the Westminster Hospital, Sir William Lawrence (1783–1867), was surgeon to the Queen, highly esteemed as a dextrous operator, and an authority on ruptures and on operative surgery. John Lizars (1783–1861) was a pupil of John Bell, and distinguished himself as a bold operator and fertile writer; early in the century he treated chronic hydrocephalus by operation. Robert Liston (1794–1847) was another remarkable surgeon and a

wonderful operator. Sir Charles Bell (1774–1842) has already been mentioned for his researches on the nerves, and he also wrote on operative surgery, and is somewhat famed for his opposition to venesection.

In Edinburgh, James Syme (1799–1870) secured great reputation both by his dexterity as an operator—which is spoken of by his own pupils as *marvellous*—and by his introduction of resection into general practice. Sir James Y. Simpson (1811–1870) aided to make the Edinburgh school famous by his researches into the domain of both surgery and obstetrics. Though the inventor of acupressure, his name will forever be associated with the introduction of anæsthesia. Professor Dunn says that, "after seeing the terrible agony of a poor Highland woman under amputation of the breast, Simpson left the class-room and went straight to Parliament House to seek work as a solicitor's clerk. But on second thought he returned to the study of medicine, asking: 'Can anything be done to make operations less painful?' The ultimate result was the discovery of chloroform, and so the suffering of one became the occasion of the deliverance of many." Upon his advocacy of chloroform in obstetrics he had to defend himself against most vehement attacks of both Scotch and English clergymen, who affected to regard such procedure as a crime that transgressed the will of the Deity; but he successfully confounded these assailants with their own weapons, proving himself their more than equal in knowledge of scripture lore.

Many other British surgeons, living and dead, deserve most honorable mention, but time and space will not permit. I cannot, however, pass by without mention Curling, Annandale, Chiene, Cheyne, Macewen, Ogston, Jonathan Hutchinson, Sir James Paget, Christopher Heath, Thomas Langmore, Savory, Holden, Holmes, Adams, Sir Joseph Lister and Sir Prescott Hewitt, of the value of whose labors I have already tried to speak; Sir William Ferguson, of whom it is said that he had the eagle's eye, a lion's heart, and a lady's hand; John Bowman, best known for his work in ophthalmic surgery; Sir Henry Thompson, the eminent lithotomist and lithotritist; and Sir Spencer Wells, Keith, Lawson Tait, and Bantock, whose names are inseparable from the history of abdominal surgery. And what can be said of the young men who are being trained in the methods and practice of their predecessors—trained not only in the direction of manual dexterity, but in experimental science, to which they make the former subservient? All honor to these scions of Great Britain's surgical art, who have astonished the world with their consummate ability! I would that time permitted recapitulation of the work accomplished in late years by the present generation of men in London, Edinburgh, and other medical centres; but the scope of these papers does not cover this ground.

I now draw to a more or less abrupt close this series of lectures, in which, as I have been obliged to cull and condense from various sources, and hence oftentimes to be extremely brief in detail, I fear justice has been done in but few instances. To epitomize the history of twenty centuries in ten lectures, is of itself a task from which I might have shrunk had I possessed a full realization of what was before me. As it is, the aim has been merely to present a bare skeleton of medical history.

LIST OF WORKS MAINLY CONSULTED.

Baas: Outlines of the History of Medicine. Translated by Henderson. New York, 1889.

Berdre: Origin and Growth of the Healing Art. London, 1893.

Bouchut: Histoire de la Médecine. Paris, 187[illegible].

Dezeimeris: Lettres sur l'Histoire de la Médecine. Paris, 1838.

Dictionaire: Historique de la Médecine. Paris, 1828.

Haeser: Geschichte der Medicin. Jena, 1853.

Hirsch: Biographisches Lexikon der Hervorragenden der Aerzte aller Zeiten und Volker. Wien und Leipzig, 1884.

Portal: Histoire de l'Anatomie et de la Chirurgie. Paris, 1770.

South: Memorials of the Craft of Surgery in England. London, 1886.

Sprengel: Geschichte der Chirurgie. Halle, 1819.

510 Delaware Avenue,
Buffalo, New York.

THE PATHOGENESIS OF ALBUMINURIA.

BY DOCTOR MARIANO SEMMOLA.

Subcutaneous injections of egg-albumen uniformly produce in dogs an albuminuri[illegible]

which during the first twenty-four to forty-eight hours is not accompanied by any histological modification of the kidneys. This is a phenomenon conditioned by the elimination of a toxalbumen—that is, an albumen which gains access to the circulation in the form of a foreign substance (a substance not capable of being rendered assimilable). It is, accordingly, a fact that the albumen, in order to filter through the kidney, needs no lesion of the epithelium, as has been asserted for nearly half a century on the basis of an erroneous and purely arbitrary physiological law, and as is yet asserted by the deluded partisans of the nephrogenetic theory of albuminuria. The persistence of the albuminuria, however, will give rise to a pathological process as a result of morbid functional irritation, which begins with simple hyperæmia and intertubular hæmorrhage, and progresses to chronic nephritis with all the characteristics of the great white kidney.

In addition to the effects cited, the injections of egg-albumen continued for a longer period will induce a dyscrasic condition of the blood albuminoids, chiefly evidenced by the pathological diffusibility which the *serin* successively attains in increasing measure.

Thus far, chemistry has not been able to show by what means is accomplished this chemico-molecular modification of the *serin* in the presence of the injected and circulating egg-albumen (which in this case is a toxalbumen); the experimental fact, however, cannot be denied. Any one may readily convince himself by measuring the coefficient of diffusibility of the *serin* before the experiment, and again four or five weeks after the injections.

In the same animal, and related to this modification of the diffusibility of the *serin*, may be observed a progressive increase in the quantity of albumen excreted through the urine; when the injections have been continued for three or four weeks, this quantity is double that of the injected egg-albumen.

Those who still cling to the error of associating albuminuria with nephritis in the necessary relation of cause and effect, will doubtless explain the foregoing facts on the theory that the albuminuria is to be regarded simply as a consequence of the nephritis produced by the excretion of the injected egg-albumen; and yet, as I proved five years since, there is no causal relation between the experimental or clinical lesions of the kidneys and the excreted quantity of albumen,—hence the considerable increase of the eliminated albumen during the experiments mentioned must be ascribed exclusively to the chemico-molecular modification (diffusibility) which has been accomplished in the normal *serin* on contact with the egg-albumen, or, in other words, to a true dyscrasic condition of the composition of the blood.

By administration of cantharidine and mersury salts, I found experimentally that the quantity of albumen excreted in cantharidine-nephritis is slight in comparison with the gravity of the renal alteration; whereas with the toxic renal inflammations induced by mercury the renal lesion is far less grave and the quantity of excreted albumen much larger. This may be explained by the fact that the modifying action of the mercury on the chemico-molecular constituents of the blood albuminoids is brought to bear independently of the development of the renal process. Again, recent experiments strengthen the position assumed by me (*Archives de Physiologie*) in 1881–1884, that the fundamental pathological condition for the passage of albumen through the kidney is the morbid diffusibility of the *serin*, which constitutes a true and peculiar dyscrasia in *morbus Brightii*, as a primary ætiological condition—as a *sine qua non* of this affection and of many other morbid conditions such as certain retardations of metamorphosis, chronic inorganic intoxications, etc. The latest researches of Freund into the alterations of the blood in Bright's albuminuria have also in a large measure corroborated my discovery of the diffusibility of *serin* in the circulation of those suffering from this malady, and likewise my theory of the hæmatogenic or dyscrasic pathogenesis of Bright's disease.

Clinics and autopsies daily teach that the albuminuria which is very frequently observed *intra vitam* is not correlated with any form of histological lesion in the kidney; and I have repeatedly called attention to a pathological error which is frequently encountered in practice—viz., systematic assumption of a nephritis because a little albumen makes its appearance in the urine. I am even satisfied that in the majority of cases, such as in acute

infectious diseases, intoxications, rheumatic and gouty dyscrasiæ, etc., the albuminuria always arises from modification in the diffusibility of the *serin*, this in turn having been caused by alteration in the chemico-molecular blood-crasis. The objection sometimes made that in all these cases—cases, as is distinctly shown by the clinic, in conjunction with a hæmatogenic or dyscrasic albuminuria — a nephritis may also exist, goes for nothing, since the latter supervenes in consequence of the action of the same general diathetic influence on the arteries (arterio-sclerosis), or of the action of the albuminuria itself on the secretory apparatus. The portion of albumen which proceeds from the nephritis in the first case is minimal (0.03 to 0.05 per cent.), and can be observed when with the renal arterio-sclerosis no general dyscrasic condition (such as arterious nephritis, gouty nephritis following uric deposits, etc.) is conjoined; whereas the quantity of the excreted albumen when there is a dyscrasic state of the blood and when the latter is the primary morbid factor, may rise to three, four, five, and even to fifteen and twenty grammes per liter, as is most strikingly shown in Bright's dyscrasia. For this very reason a nitrogenous diet augments the quantity of albumen, as I have repeatedly and experimentally shown.

By continuing the subcutaneous injections of egg-albumen, albuminuric retinitis is produced,—even during life the animals exhibit an appreciable weakening of the vision. On examining the retina, De Vincentis observed the development of very characteristic lesions —a more or less diffused turbidity of the retina, especially in the pyropapillary region. The microscope, in the case of animals subjected for seven or eight weeks to injections of egg-albumen, revealed distinct hypertrophy of the retinal neuroglia, with multiplication of the nuclei of the connective tissue. Corresponding with the nuclear layers, this hypertrophy of the connective tissue had produced an appreciable prolongation of the radial fibres, the latter rising above the level of the external layers.

I have frequently observed the phases of regressive alteration—be it in the form of fatty degeneration or of hyaline degeneration—in the elements of the retina, predominatingly in the layer of the external nuclei, and at times also in the layer of the thick ganglionic elements. Here and there can be observed, between the individual retinal layers, hyaline masses produced from the coagulation of the inflammatory exudate. In one case I was able to determine the presence of small point-like hæmorrhages from the retinal vessels.

From the foregoing it may be concluded that it is possible to induce Bright's disease artificially, and characterized by the following peculiarities: albuminuria; secondary nephritis; dyscrasic condition of the blood with diffusibility of the *serin*, hence with progressive augmentation of the quantity of albumen excreted; serous infiltrate in the urine; progressive diminution in the quantity of urates; albuminocholia—which during life may also be shown by the presence of albumen in the fæces; hepatic inflammations; characteristic retinitis. Indeed, at the present time no disease may be reproduced so completely in an experimental manner, and is therefore so admirably suited to illumination in its pathogenic mechanism, as Bright's albuminuria. The deficiency which really exists, and which will never be filled by the labors of the laboratory, is, the lack of the knowledge of the mechanism through which Bright's albuminuria is spontaneously developed; in other words, we do not know what those functional disturbances are, in consequence of which the albuminoids of the food become gradually and slowly modified in their chemico-molecular constitution, and rendered unassimilable, that is, unsuited to metamorphosis (as a sequel there is diminution of urates, of the regressive products, and of the toxicity of the urine), conditioning a general dyscrasic state whose first effect is a disease process in the kidneys, precisely because these organs, in consequence of the forced and providential excretion of a toxalbumen, are most exposed to injury. Unfortunately this very ignorance includes the physiological factor, for we are thus far quite in the dark as to the phases of chemico-molecular transformations of the molecule of albumen derived from the food, nor—which is most important—do we know the organs and functions which accomplish this chemico-biological progression until the

albumen is made capable of appropriation in the process of nutrition.

The foregoing renders it superfluous to dwell on the therapeutic deductions which may be drawn from a general view of the pathogenesis of albuminuria — deductions which, as I have repeatedly asserted, may lead to surprising remedial results, especially when rational treatment is instituted during the early history of the disease. The aim of such treatment to the intelligent and conscientious physician must be the progressive improvement of the activities of metamorphosis, without even dreaming — and this seems to be the chief purpose of the deluded advocates of the nephrogenetic theory — of combating the excretion of albumen, since the latter process in Bright's disease always represents the beneficent and providential elimination of a fundamental substance which has become heterogeneous and toxic.

Naples, Italy.

CEREBRAL TUMOR IN A CHILD OF EIGHT YEARS.

BY J. WILLIAMS, JR., M.D.

Some six months since a lady consulted me regarding her son, aged eight years, who proved to be suffering from strabismus and also motor paralysis of the entire left side — the face excepted. She had first observed the squint some three weeks previously, but being busy had neglected to consult a physician. The day before I was consulted, while at play the child fell, and the motor paralysis suddenly succeeded. He did not strike his head, nor did he give evidence of having received any injury from the accident.

I found there was convergent squint of the left eye; the field of vision unimpaired; the pupil normal in size and in response to light and shade. The motor paralysis of the left arm and leg was almost complete; the fingers could be moved slightly, but the arm could not be raised to any extent; the left leg could not be moved except in a swinging motion. The muscles of the face and tongue were not affected. Sensation was normal over the entire body; patellar reflexes and ankle clonus unaffected. He suffered no pain. Temperature 99.5°; pulse 72 to 76, small and tense. The skin was the seat of a peculiar hot, burning feeling.

The little lad talked a great deal more than usual; gave utterance to many bright and witty things; appeared perfectly happy, and said he felt very well. His words, however, were prolonged, and there was partial deafness of the left ear. No nausea or vomiting; appetite normal. The affected muscles responded both to the galvanic and to the faradic current.

I was unable at this time to make out a satisfactory diagnosis, but as the days went by and there was no apparent improvement in the condition I became convinced of the existence of a cerebral tumor, and advised that a specialist be consulted, which was finally acceded to and the boy taken to Doctor David Inglis, of Detroit, who, after careful examination, confirmed my diagnosis, in addition locating the tumor in one of the crura.

The patient had now remained in about the same condition for about eight weeks; and he so continued until the ninth week, when vomiting set in, along with obstinate constipation and occasional attacks of occipital headache lasting for several hours; when the bowels were moved by enema, marked prostration and vomiting followed. The urine was normal at all times. The temperature remained between 99.5° and 100.5° throughout the whole sickness. The skin retained the peculiar pungent feeling, but when the child was bathed the moisture on the skin disappeared instantly.

About this time the child, without being told, seemed to realize that he would not recover, and gave his mother minute directions in regard to his funeral. He gradually failed, and finally died from exhaustion sixteen weeks after the paralysis first occurred. The mental faculties were perfect up to a few hours before death.

Post-mortem examination revealed a small, hard nodule encapsulated by a tumor of semi-solid nature one and a half inches in diameter, situate in the substance of the left hemisphere, at the beginning of the crus, and in turn surrounded by a yellow creamy fluid; there was likewise marked increase in the amount of cerebral fluid. The external surface of the brain after the skull-cap was removed presented nothing abnormal as to

shape or size, and it was only after cutting into the substance of the brain itself that the tumor was discovered.

I am unable to obtain any history of consumption or specific disease in parents or grandparents; the former were healthy except that the mother had occasional attacks of asthma. The mother had three other children, all of whom are living and healthy; she could afford no clue to the malady further than to recall the fact that for the past year the lad had complained a great deal of being tired and sleepy, and very often on coming home from school would throw himself on the bed and say, "Oh! mamma, I am so sleepy."

This case was of marked interest to me, and may interest some other members of the profession. Certainly a cerebral tumor in a child so young is not usual; and as there was no history of an injury to the head, its cause will remain a mystery. The tumor—as well as the paralysis which undoubtedly was secondary thereto — was on the left side. There was no wasting of the muscles of the affected side, and sensation was not impaired.

Adrian, Michigan.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

SUPERNUMERARY TESTIS.

Editor MEDICAL AGE:

Under the date of April 25th of the current year (page 256) you publish an account of a case of supernumerary testis. A few days after perusing this I was confronted by a similar case, in a young man aged twenty years, who consulted me regarding an annoying "round lump" in the left scrotum. This was first observed some five years since, and —he thought—had recently increased slightly in size.

Examination revealed a small body about the size of a hazel nut, presenting the characteristics of a true testicle, situate a little above the normal gland of the same side. There was but one left spermatic cord, but the supernumerary testicle appeared to be connected therewith by a branch of the cord or a band of fibrous tissue. Pressure upon the supernumerary body gave the same painful sensation as was developed by like manipulation of its fellow, and it was more quickly retracted than the latter by cremasteric reflex. The right testicle was somewhat larger than its normal fellow.

Very truly yours,

JOSEPH L. MOONEY.

295 Michigan Avenue,
Detroit, Michigan.

PECULIAR DEATH FROM CHLOROFORM.

Editor MEDICAL AGE:

On April 6th, a boy aged twelve, hearty and robust-looking, was given chloroform in order to facilitate amputation of the little finger. He was placed in a recumbent posture and a few inhalations of the anæsthetic were taken, when it was suspended in order to twist the napkin employed into the form of a cup. Perhaps half a minute after suspension of the anæsthetic the boy started up, turned upon his abdomen, and endeavored to get off the couch, when he gave evidence of suspended animation. He was immediately carried into the hallway, his tongue pulled out, rectum dilated, and every means taken toward resuscitation; finally, artificial respiration was resorted to for an hour, but in vain.

This case is worthy of note from the fact it is extremely rare that a child succumbs to chloroform.

P. N. RANDLES, D.D.S.

Pleasantville, Pa.

SCIATICA.

Editor MEDICAL AGE:

Permit me to emphasize the fact that *deep* injections of morphine and atropine apparently afford the greatest benefit in sciatica. A case of six months' standing, and of much more than ordinary severity, which had resisted every other mode of medication, yielded to one *deep* injection of this character followed by flexion of the thigh on abdomen —this flexion is a most important factor in the treatment, as almost every patient complains of intense, deep pain along with a sensation "as if something were tearing loose."

McNULTY, M.D.

Ellsworth, Minn.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., MAY 25th, 1895.

Editorial.

DEMISE OF THE INDEX MEDICUS.

The discontinuance of the *Index Medicus* is announced. This will be a sad blow to the coterie of authors and editors who have found its columns so satisfying a resource in furthering their labors in the interests of medical and surgical literature and science.

THE MEDICAL AGE had hoped this monthly would be sustained by those in whose interest solely it has been published, but it appears these hopes were not to be realized. Those familiar with the history of the *Index Medicus* are aware it has for a decade been published at an annual deficit of hundreds of dollars; that it has been carried by its publisher in a most unselfish way, simply as a tribute to progressive medical science. But even a voluntary tribute, when it rolls up into the thousands, becomes a burdensome tax which no individual, however public-spirited or generous, can afford to carry.

In October last the medical profession was notified the publisher of the *Index Medicus* did not feel it incumbent upon him to sustain longer a journal which was apparently little appreciated by those in whose interest it was published; thereupon a few urged its continuance, pledging a support that would at least reduce the annual deficit to $500; but these pledges have not been redeemed, and suspension became inevitable. This is greatly to be deplored, as the *Index Medicus* is essential to the Index Catalogue of the Library of the Surgeon General's Office. The first volume of the latter was issued in 1880, and there is no means of making volume one equally available for reference with volume sixteen, now in press, except through the former. Volume sixteen closes the Catalogue, and now, with the suspension of the *Index Medicus*, the value of the former is greatly impaired for future years, and it is only a matter of time when it will become practically obsolete.

That attempts may be made in the future to revive the *Index Medicus*, or at least to provide a substitute therefor, is not improbable; but the hiatus that will obtain will be highly detrimental to science and authorship. Further, the present editors of the *Index Medicus* will not be available, since one has already entered upon a new field of labor, and the other will not be apt to again tempt the caprices of an unappreciative medical public.

We say frankly, the suspension of this most valuable periodical is a national misfortune; it is moreover a disgrace to the medical profession of the country, inasmuch as it evidences that few of the 106,000 practitioners within the United States are interested in elevating their calling—not enough, in fact, to form a respectable battalion. *Eheu, Eheu!*

HIGH ART AND THE DAILY PRESS.

The daily press is especially strong on illustration. The facility with which old "cuts" are worked over and over and made to do duty for anything and everything, from a Bushman in South Africa to the Premier of a European monarchy, surpasseth all understanding.

During the recent session of the American Medical Association in Baltimore, the press of that city essayed to do great honor to the notables in attendance. Doctor Donald Maclean, the ex-President, his polished sinciput adorned with an old-time bag-wig shorn of its pig-tail attachment, was held up to view "deciding a point of order."

Admitting such procedure may be very enterprising journalism in Baltimore, in this particular instance it is not especially flattering to Detroit. The latter city has always evinced pride in the fact that a man of such distinguished presence and reputation as Doctor Maclean resides within its borders, but when the *Baltimore American* insists upon

reducing his six feet of stature to something approaching four feet three, and ornamenting his head with a second-hand, rat-nipped, horse-hair wig six inches thick, we fail to appreciate the compliment.

We also observe that the same "cut" which did duty in the *Baltimore American's* columns at the time of the Pan-American Congress as the counterfeit presentment of I. N. Love, of St. Louis, is now labeled Lester H. Montgomery, of Chicago. Not being personally acquainted with Doctor Montgomery, it remains an open question who is the person flattered, the gentleman of the Mound City or the one residing on the shores of Lake Michigan.

Considering the general character of newspaper pen and pencil portraits, it for some years has been a wonder to THE MEDICAL AGE that there are not more cases of "justifiable homicide."

ABSENCE OF EPIGLOTTIS.

Doctor Thomas Hubbard, of Toledo, Ohio, reports the unique case of a German woman, aged thirty-five years, in whom laryngoscopic examination showed the epiglottis to be absent—or rather, only a small strip of this organ remained, about one centimeter in breadth and about half a centimeter in length; the upper margin was somewhat granular, and at the edges angular. Though there was some tension of the lateral epiglottic folds, the intra-laryngeal structures appeared normal in their relations. The mucous membranes over the arytenoids were somewhat thickened and hyperæmic.

Since syphilis, congenital or acquired, was excluded, Doctor Hubbard surmised that this condition of the epiglottis was of recent date and probably a sequel to tuberculosis, or possibly lupus.

RARE ANTIPODEAL POISONS.

"Nature, having made all sorts of useful animals and birds for other parts of the world," said Sydney Smith, "seemed determined, when supplying life for Australasia, to give free play to her fancy, and accordingly made cherries with the stones outside; a monstrous animal as tall as a grenadier, with a tail like a bedpost, hopping along at the rate of three hops to a mile, with several young ones looking out of its false uterus; and a kind of mole with webbed feet and the bill of a duck, which agitated Sir Joseph Banks and rendered him miserable from his utter inability to decide whether it was a bird or a beast."

A very interesting anniversary address was recently delivered before the Royal Society of New South Wales by Doctor Anderson Stuart, in which he dealt with certain creatures that possess some interest for physicians. Regarding *Ornithorhynchus paradoxus*, he remarked it was for a long time considered to be quite harmless and destitute of any weapon of offense, although the hind legs of males were armed with a powerful spur, apparently connected with a gland, which was later believed to be a weapon allied to the armory of snakes, scorpions, and bees, all of which possess a sort of hypodermic poison syringe. Doctor Stuart determined, if possible, to solve this question; and he gives independent accounts, which coincide perfectly, and from them concludes that at certain seasons the spur secretion of the *Ornithorhynchus* is virulently poisonous. The mode of attack is not by scratching, but by lateral inward movements of the hind legs. A dog was "stung" three times, the symptoms much resembling those from bee or hornet poison, the animal evincing drowsiness and great pain, but no tremors, convulsions, or staggering. It is worthy of note that a certain immunity seems obtainable, for the animal suffered less on the second occasion and still less on the third. Two men were wounded, in both of whom the symptoms were the same as in the dog. No deaths are reported in human beings, though four occurred in dogs.

Another poisonous creature is the red-backed spider — *Lathrodectus*, — though the variety found in the neighborhood of Sydney, N.S.W., is not so virulent as the *Lathrodectus decempunctatus* from which Professor Kobert obtained a poison so powerful that $\frac{1}{28}$ grain would kill a man of 150 pounds weight. Many instances of fatal results from the bite of these spiders are recorded.

Another pest, very fatal to dogs, is a form of wood or bush tick. In this case also one attack confers immunity from a second, and

in districts where this parasite abounds dogs are frequently made immune by permitting the tick to remain until the first poison symptoms appear, and then removing it, repeating again and again upon recovery.

EDITORIAL NOTES.

Redivivus.—

In the early fifties a patient, while waiting in the office of the late Doctor Pope of St. Louis, gave vent to his feelings by scribbling the following on a convenient blotter:

When sorrow's cloud is cast athwart
The sunshine of my mind,
When I, with gloomy care distraught,
No recreation find;
When sighing o'er my helpless lot,
And what I used to be,
I'll seek some quiet tranquil spot
And pass a small bougie.

Let strictures on my conduct pass;
Unnoticed let them be;
A stricture somewhere else, alas!
Is more deplored by me.
In hope this blight on manhood's bloom
I yet effaced may see,
I'll hie me to my quiet room
And pass a small bougie.

This the *Columbus Medical Journal* recently rescued from almost oblivion, accrediting to "Erichsen's Rhymes." It, however, originally appeared in the *Peninsular Medical Journal* of Detroit, when that journal was under the editorial guidance of the late Moses Gunn, and was subsequently copied in the *Boston Medical and Surgical Journal.* The *Peninsular Journal* died in 1859, though another periodical of the same name was published for a brief period at Ann Arbor.

The American Medical Association.—

The Baltimore session which closed a few days since was one of the most successful of the annual gatherings of this Association.

The officers for 1896 are: President, Doctor R. Beverly Cole, of San Francisco, Cal.; First Vice-President, Doctor J. J. Chisolm, of Baltimore; Second Vice-President, Doctor John C. Legrand, of Alabama; Third Vice-President, Doctor Augustus P. Clark, of Massachusetts; Fourth Vice-President, Doctor T. P. Satterwhite, of Kentucky; Treasurer, Doctor Henry P. Newman, of Illinois; Secretary, Doctor W. B. Atkinson, of Pennsylvania; Librarian, Doctor G. W. Wise, of Illinois. Members of the Board of Trustees: Alonzo Garcelon, of Maine; Doctor I. N. Love, of Missouri; Doctor James E. Reeves, of Tennessee. The members of the Judicial Council are: N. S. Davis, Illinois; H. A. Didama, New York; John Morris, Maryland; W. E. B. Davis, Alabama; George W. Broome, Illinois; D. W. Smouse, Iowa; M. B. Ward, Kansas; William M. Welch, Pennsylvania.

At the next annual meeting, at Atlanta, Georgia, Nicholas Senn will deliver the address on Surgery, William Osler that on General Medicine, and Geo. H. Rohe that on State Medicine.

Higher Education for Pharmacists.—

This was the subject of a most able paper presented in the Pharmacy Section of the American Medical Association by Professor Joseph P. Remington. He declared the pharmacist "must ever be the intelligent coadjutor of the physician; and that in the higher education in the colleges of pharmacy, laboratory instruction plays an important part." Professor Caspari supplemented this with the statement: "In many stores the drug clerk gets more experience in selling garden seed, paints, and coal-oil, than anything else; yet with such experience a man gets a diploma as Doctor of Pharmacy, while the laboratory student gets only a certificate as Pharmaceutical Chemist."

Physiology and the Public Schools.—

Professor Michael Foster—and it will be difficult to find any better authority—urges that the study of physiology beyond the mere elements is impossible without previous adequate knowledge of chemistry and physics; that if the study is to be real, the whole body must be dealt with, no parts being excluded for special reasons,—and this means the real study cannot be taken up until after puberty. He concludes that for these reasons it seems to be undesirable to press the introduction of physiology into schools as an educational subject, since by the time a boy or girl is thus prepared to study this topic it is time that he or she should leave school.

The Root of the Matter.—

During a discussion by the American Medical Association, of proprietary remedies and

the advertising of same in the Association journal, Doctor P. J. Connor pertinently remarked that if the members would refuse to prescribe proprietaries they could conscientiously oppose the publication of such advertisements. He moved that a committee of three be appointed to ascertain how many members of the Association were accustomed to prescribing proprietary remedies.

Medical Advertisements in the Journal of the A. M. A.—

The American Medical Association has decided that no advertisements of medicinal preparations can hereafter be inserted in the Association journal—after the expiration of present contracts—unless the exact working formula of the preparation appears in the advertisement.

This certainly is a step in advance and a resolution that has long been desired by the better class of medical men.

Remarkable if True.—

A "doctor" who died in St. Louis on April 1st was said to have reached his one hundred and fortieth year. Doctor A. J. Buck declares that the Masonic record of Doctor Hotchkiss has been traced back one hundred years, showing that he must have reached one-and-twenty years more than a century ago. A letter received from his old home in Virginia over a year ago declares that he was born there in 1755.

Pterygium.—

Doctor Baylis, in the *Memphis Medical Journal*, declares he has "seen four cases of pterygium apparently cured by the use of a bichloride-of-mercury eye-wash (1 to 4000) containing cocaine and morphine."

A method very satisfactory in the majority of instances is, touching the pterygium daily with a camel hair brush laden with wine of opium.

A Book on Cats.—

Another valuable addition will shortly be made to veterinary literature, under this title and the authorship of Professor R. S. Huidekoper. It promises general information of much worth, including classification, varieties and care of feline diseases. It will be profusely illustrated.

New Micro-organism in Pork.—

Doctor Frank J. Thornbury, of Buffalo, announces a new micro-organism, of the "yeast group," which he denominates *Saccharomyces porcus*. He apparently considers meat containing it dangerous, as it destroys white mice and rats twenty-four hours after inoculation.

Facilis Descensus.—

The Great Retired has mysteriously disappeared from the list of members of the faculty of the New York Post-Graduate. This fact, in connection with "animal extracts" prepared in his "own laboratory," under "direct supervision," etc, is most broadly suggestive.

Four Years of Medical Study.—

At the meeting of the American Medical College Association in Baltimore, it was decided by a vote of twenty-nine to five that a four years' course of study should be demanded of all students henceforth matriculating in institutions belonging to this organization.

A White Panther.—

Recently arrived at the Jardin des Plantes, Paris, an albino panther, which is certainly a great novelty. This is not the cougar or catamount (*Felis concolor*) which obtains the title of panther in the United States, but the albino of the black creature peculiar to the East Indies.

Professor Thomas Huxley.—

Some eleven weeks since Doctor Huxley was seized with influenza, and latterly his illness became critical. There was a period of ten days when his survival was doubtful. We are happy to announce that he is now, apparently, on the high road to convalescence.

Corsets.—

Marchland says gallstones in women are a not unfrequent sequel to the pernicious habit of tight lacing.

Bacteria and Cold.—

According to Pictet, a temperature as low as −415.5° F. fails to destroy any form of bacterium.

Items and News.

Supposed Rabies.—

The Bishop of Cork, the Right Reverend Doctor Meade, and his coachman, have gone together to Professor Pasteur, having been bitten by a little terrier dog. That the animal showed at the time no evidence of being mad, may be judged from the fact that for five days the Bishop did not even consider it necessary to consult a surgeon. Nevertheless, a veterinary surgeon was called to inspect, and he committed the usual blunder of ordering the dog to be destroyed, which was done. We are glad to believe that neither the worthy and highly respected Bishop nor his coachman is in any danger of hydrophobia. There is not a scintilla of proof, as far as we can judge from the reports, that the animal was rabid, and, if it were, the five days which elapsed would certainly have put the fact beyond doubt. But the time-honored folly of destroying the dog was committed, and thus all possibility of proving the negative and relieving the apprehensions of relatives and friends was lost. Surely the veterinary numbskull would have lost nothing and gained much by locking the dog up and awaiting symptoms. We assume that this snappish cur will be recorded by the Veterinary Department of Dublin Castle as mad, along with the hetacomb of other dogs batoned to death by ignorant people because the poor animals hung their tongues out and ran frantically from the pursuing mob.—*Medical Press and Circular.*

The State Stands Aside.—

The "social purity" abnormalities of London succeeded in inducing the hysterically religious Viceroy of India to order the abolition of registration of prostitutes. *The Lancet* recently cited some terrible results of this, among others the case of a young Canonese girl who tried to commit suicide because one of her brothers, a speculator in slaves, threatened to sell her to another brother, also a speculator in slaves. In speaking of this case *The Lancet* says that since the system of State protection has been abandoned the only possible release for these poor creatures is death. Labouchere, who points to this (in *Truth*) as an illustration of the folly of well meaning women and silly men, says an officer high in command in the army in India gives him data of the most startling character, the conclusion of which is that out of 71,000 British troops in India, over 23,000 are regularly rendered useless from one cause alone. The effective strength of the army is thus reduced in numbers below 48,000. In view of these facts Labouchere logically asks: "Can those who have allowed disease full play, and consequently involved the Empire in peril, suggest any way out of the difficulty?"—*Medical Standard.*

Gallic Rubbish.—

It is reported that great consternation has been stirred up in aristocratic circles in Paris by the discovery of an infallible law by which children may trace their parents, and determine especially who their father is. Usually the mother is more easily traced than the father. The *savant* who made this discovery is overwhelmed with requests to apply it in the cases of individuals who are anxious about their parentage, and is also threatened with every imaginable punishment if he does not keep it a close secret, or if he applies it or allows it to be applied in such investigations.—*The Sun.*

Words of Wisdom.—

When a bacteriological diagnosis, in the absence of any clinical evidence of the disease, can agonize the hearts of parents and friends in a private dwelling, then that bacteriological diagnosis becomes a cruel guide and a sin against humanity. When the bacteriological diagnosis, in the absence of any clinical evidence of the disease, can force the helpless and defenseless poor into a hospital for contagious diseases, to be subjected to a treatment about which we know nothing, then it becomes a crime.—*American Medico-Chirurgical Bulletin.*

Asphyxia in the New-born.—

A writer in a Paris journal treats this condition by seizing the tongue of the child with forceps and making rhythmical traction, alternating by allowing the tongue to fall back. By this method natural breathing is established in ten minutes. One case is quoted where, in spite of the use of ordinary methods for one hour and a half, breathing was not established. In the last moment this method was used, and in a short time the child breathed naturally.—*University Medical Magazine.*

Creosote in Phthisis.—

Though reports are generally favorable, still Creosote often fails. Give two drops three times a day, increasing slowly till the bowels are irritated; the dose may in this way be carried up to ninety or one hundred drops. It is contra-indicated when fever occurs. It

may be given in capsules but best in milk, gulped down. In chronic bronchitis it is of great advantage, but when the urine becomes smoky discontinue.—*The Lancet.*

Patent Communion Service.—

A Grand Rapids (Michigan) clergyman has invented an individual church communion service and had it patented. It consists of a pyramid of three disks attached to a central standard. The disks have apertures in which seventy-five tiny cups repose, each holding a spoonful of wine. At the top of the standard is a ring and swivel. A long handle with a hook at the end is used in passing the standard.—*Medical Record.*

Camphor.—

Powdered Camphor, prepared as follows, will not again conglomerate: Dissolve camphor in one and a half parts of alcohol, and precipitate by the addition of four parts of water; collect the precipitate, wash with an abundance of water, and dry. By keeping an account of the quantity of Camphor used, the quantity left in the diluted alcohol can be calculated and this solution used for making tincture, etc.—*Der Pharmaceut.*

Medical Timber.—

The following was recently received by the secretary of an Ohio college:

Gents Sir—I want to atend Either the alopath or Homeopath School i havent Deturmined Which. Sennd me some printing Mater to look over. Send me a Blank form of yorr grade Sheats and Diplomes, So that i cann givee my self som considerations in What. your. turn out. is.

Yourrs ans soon

Ophthalmia Neonatorum.—

A sure cure has been discovered by a Texas legislator. When the bill to prevent blindness by compelling early attention to sore eyes in the new-born was before the Legislature, an old fellow, calling himself "doctor," hooted at the idea, and said "a little mother's milk dropped in the baby's eye would cure it sure pop, every time." It killed the bill.—*Texas Medical Journal.*

Incompatible.—

Add to your explosive drugs a mixture of one part of nitric acid to one and a half parts of carbolic acid. I came near getting my back hair raised a day or two since by not noticing that about a drachm of nitric acid still remained in a vial.—Doctor Brodnax, in *Cincinnati Medical Journal.*

Remember!—

The physician who turns his patients over to the tender mercies of the nostrum-makers is faithless to his trust. . . . The nostrum-makers are alike the enemies of humanity, of medical science, and of the moral and material interests of the practicing physician.—*Philadelphia Polyclinic.*

Buccal Dryness.—

When the mouth is dry from the administration of opium or any of its alkaloids, give the patient lemonade or other acid liquid. The salivary glands, yielding an alkaline secretion, are stimulated to greater activity by the presence of an acid substance.—*Nursing World.*

Albumen.—

A trace of albumen in the urine may depend upon actual pathological changes, or it may be due to a slight temporary disturbance of no more importance than the escape of a few drops of blood from the capillaries of some mucous membrane.—*Exchange.*

What is Diagnosis?—

Given certain elements of disease that can be seen or made known by others: To infer the existence of other elements that cannot be seen but which are commonly associated with the revealed ones. Then to label properly the entire aggregation.

Asphyxia from Illuminating-Gas.—

Hoffman succeeded in relieving the symptoms by subcutaneous administration of nitro-glycerin, $\frac{1}{100}$ grain. The injection was made in the præcordial region, and was followed by marvellously prompt results.—*Exchange.*

To Promote Uterine Contractions.—

Professor I. G. M. Goss has for years taught that one-half pint of *hot* water thrown up the rectum would stimulate the uterus and promote stronger contractions in languid labors, or reduce tension in lingering ones.

Hydrophobia.—

The Parisian statistics show that the mortality from dog-bites in Paris is as great now or greater than before Pasteur opened his institution.

An Epitaph.—

Here lies the body of Mary Ann Chowder,
Who died from drinking a seidlitz powder.
Gone from this world to her heavenly rest.
She should have waited till it effervesced.

Book Reviews.

McClure's Magazine. Price, 15 cents; $1.50 per year. S. S. McClure (Limited), New York.

The June issue contains excellent short stories by Rudyard Kipling, Robert Barr, and Stanley J. Weyman. The meetings of Napoleon III. with King William of Prussia and Prince Bismarck are described from personal observation by Archibald Forbes; new information regarding the most discouraging period of General Grant's career, derived mainly from a fellow-townsman of General Grant's, who throughout this time was his almost daily companion, appears in this number. Ida M. Tarbell contributes a paper on "Napoleon's Relations with the United States;" the marvellous work of that best disciplined of armies, the working force of a great modern circus, in erecting a vast canvas city between dawn and breakfast, and in taking it down and storing it on the cars between dark and midnight, is described; the story of Lincoln's secret night journey from Harrisburg to Washington in 1861, to escape the possibility of assassination, is told by Colonel A. K. McClure. There is also an article on "Sardou," the most successful of living dramatists, describing him in his daily life, both in his Paris home and at his country seat at Marly.

Review of Reviews. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

In the April number the editor discusses recent political events, especially the doings of the Fifty-third Congress, the appointment of delegates to an international monetary conference, the election of U. S. Senators by various State legislatures, the deadlock in Delaware, the constitutional convention in Utah, the arguments before the Supreme Court on the constitutionality of the income tax, the change in the administration of the Post-Office Department, and other incidents of the month under review.

In "The Progress of the World" for May the editor sums up the significant events of the month preceding. Prominent topics thus treated are the Income Tax Decision, the Chicago Election and the triumph of civil service reform, the Cuban Revolt, the Venezuelan Boundary issue, and the British Claim in Nicaragua. There are also some interesting comments on recent progress in the South; the low prices of sugar and cotton are discussed in their relation to the prevailing feeling of unrest among the agriculturists of the Gulf States.

The Peterson Magazine. Price, 10 cents; $1.00 per year. Penfield Brothers, New York.

Contents for April are: "Malmaison and Rueil in 1894," by C. H. Adams; "Gilbert Daingerfield," by J. H. Garnsey; "Some Plays and Players of the Season," by H. P. Mawson; "A Painter of Western Life," by H. R. Wray; "Nicaragua and its Canal," by Warner Miller; "A Question of Time," by L. G. Giltner; and "A Chat with My Friends," by Ella Wheeler Wilcox.

In the May issue Isabel Macdonald writes of "Some American Women Painters," Gertrude Atherton of "May-Day Poets and Chroniclers," T. J. Mackey of "Four Unrecorded Heroes," Odette Tyler of "The Diary of a Chorus Girl;" "The American Locomotive" is by C. W. Strine; "The Penitentes," by Virginia Shaffer; "Lindy," by Agnes Ellis; "Miss Betty," by F. B. Dillingham; "Mates," by Mignon Villars.

The American Naturalist. Price, 35 cents; $4.00 per year. Edwards & Docker Company, Philadelphia.

The May number contains a continuation of "The Birds of New Guinea," by G. S. Mead; "The Heredity, Mechanism, and Search for Unseen Factors of Evolution," by Henry F. Osborn; "On the Presence of Fluorine as a Test for Fossilization in Animal Bones (continued), by Doctor Thomas Wilson; "The Genera of Branchiostomidæ," by Theodore Gill. Under Recent Literature is given a digest of Ord's "Zoölogy" and of "The Life of Sir Richard Owen." Under General Notes there are departments of Geography and Travel, Mineralogy, Palæontology, Botany, Zoölogy, Entomology, Embryology, Psychology, Archæology, Ethnology, Microscopy, etc. Four pages are devoted to proceedings of scientific societies and general scientific news.

Popular Science Monthly. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

Doctor Andrew D. White opens the June number with the first of a group of papers under the general title "From the Divine Oracles to the Higher Criticism;" Herbert Spencer contributes a second article on "Professional Institutions," in which he traces the evolution of the professions of the physician and surgeon; an article on "The Psychology of Woman," embodying the results of a careful scrutiny of the subject, is by Professor G. T. W. Patrick; "The Decline in Railway Charges" is discussed by Henry T. Newcomb.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

Contents of the May number are: "Ship-Building in Quebec," by Henry Fry; "The Underground Railway and One of its Operators," by Thomas E. Champion; "The Early Artists of Ontario," by J. W. L. Forster; "Robert Louis Stevenson," by Hector Charlesworth; "The Home of the Ouananiche," by E. T. D. Chambers; "Old John's Easter Lilies," by Ella S. Atkinson; "Dora," by William Lutton; "Ontario Ladies' College," by Reverend John F. German; "Glimpses of Norway," by Frank Yeigh; "The Manitoba School Question and the Remedial Order," by Edward Meek.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 per year. Donahoe's Magazine Company, Boston.

The May number is a special "Jubilee" edition, in honor of Archbishop Williams of Boston, the Metropolitan of New England. A notable article, by Augustin Daly, is on the "Methods of Producing a Shakesperian Play," which is illustrated by pictures of settings of "Two Gentlemen of Verona." Mary E. Blake describes the fascinations of a "Pedestrian Tour through the Byways of Europe." The remaining articles, sketches, etc., are in keeping with the customary brightness of this periodical.

THE LAND AND GAME BIRDS OF NEW ENGLAND. By H. D. Minot. Second edition. Cloth; 8vo; pp. 500. The Riverside Press (Houghton, Mifflin & Co.), Boston.

This is one of the most remarkable, and at the same time most interesting, of the ornithological works devoted to the feathered inhabitants of North America. The local designation of the volume is, however, misleading, since there are few species described that are not to be found in the greater portion of the United States east of the Mississippi, and in Ontario and portions of Quebec. Another remarkable thing in connection with the volume is that while written by a youth of seventeen with almost no outside help, for twenty years it has been ranked among the authorities on the subject of which it treats. Mr. William Brewster, who edits this second edition (Henry D. Minot died November 14th, 1890), remarks the popularity of the volume "is due partly to the large amount of original matter which it contains, partly to the pleasant style in which it is written, and in no small degree to the attractive personality of Mr. Minot himself." Most of the biographies relate to Mr. Minot's personal experience or impressions, and every page shows he was deeply in earnest, full of reverent love for Nature, careful in observation, temperate in statement, and singularly logical and dispassionate.

The volume long ago deserved a second edition, but republication was postponed on account of the editor's lack of the necessary leisure. The editing by Mr. Brewster, who is well known throughout the length and breadth of the land and in foreign circles as a careful and conscientious ornithologist, has added materially to the merit of the work. There is not a page that is dull or uninteresting to any individual who has the slightest regard for bird life, and much of the matter will quickly attract those who have no regard for scientific ornithology. Again, it is not only an excellent text book for the beginner and amateur ornithologist, but is replete with rich material to be had nowhere else, and of value to every working and practical scientist in this branch. Neither time or space will permit us to say all the good things which this volume demands. It must be read to be understood, and once lifted from the table it will be with regret that it is laid down until "finis" is reached.

SURGICAL PATHOLOGY AND THERAPEUTICS. By John C. Warren, M.D. Cloth; large 8vo; pp. 832. Price, $6.00. W. B. Saunders, Philadelphia.

The science of surgical pathology has long since overgrown the limits of space which can be allotted to it in text-books of surgery.

Since the publication of Billroth's work upon this topic, there has been nothing satisfactory in character offered the medical profession until the present volume, which coming from the source it does, is most authoritative. It treats of a majority of the morbid processes encountered by the surgeon: of hyperæmia, inflammation, repair processes, gangrene, shock, fever, septicæmia, pyæmia, erysipelas, tetanus, actinomycosis, anthrax, tuberculosis, diseases of bone, and tumors. Special attention is given also to antiseptic surgery. The author associates as closely as possible pathological conditions with the treatment and symptoms of surgical diseases. Indeed, the volume may be well termed a modern medical classic, for such is the position to which it has already risen.

Sold only by subscription.

THE WHITE COMPANY. By A. Conan Doyle. Paper 16mo; pp. 362. Price, 25 cents. Rand, McNally & Co., Chicago.

This is one of the best, if not *the* best work of a well known author. The White

ompany deals with the times of Edward, The Black Prince," and the days of chivalry ıd knightly honor. The word-painting and escriptions of knightly doings in that por-on of France which was formerly held ıder the English banner, and of the at-:mpted expedition into Spain by Prince dward, are graphically told. There is little xemplification of *affaires de cœur*, although ıere is a love episode woven like a thread ırough the narrative. The fortunes of Sir igel Loring and his young squire, and of ıe mighty bowmen of Hampshire, are car-ed along without a single dull line Withal)octor Doyle shows a familiarity with eraldry, as with history, that is exceedingly ıre in this nineteenth century. The book one that will well bear perusal by old or)ung—with the latter it will prove a stimulus) the study of history, with the former re-esh much that is not only highly interesting ut apt to be forgotten.

YCLOPÆDIC PHOTOGRAPHY. By Edward L. Wilson, Ph.D. Cloth; 8vo; pp. 500. Price, $4.00. Edward L. Wilson, New York.

Mr. Wilson has succeeded in producing the ıost comprehensive reference book in its lass in any language. Some idea of its scope ıay be had when it is understood that there re 2,500 references upon different subjects onnected with the theory and practice of hotography. By connecting the various eferences upon any selected subject it will e found that this volume constitutes a con-ise manual of chemistry, optics, manipula-on, reproduction, art terms, formulas, and ıethods applied in photographic practice.—'he historical references are unusually com-lete. Moreover, the book is profusely illus-rated, well printed, substantially bound, and p to date on all subjects. It is a volume ıvaluable to all interested in photography, 'hether amateurs or professionals.

IEDICAL ANNUAL AND PRACTITIONERS' INDEX. Cloth; 12mo; pp. 648. Price, $2.75. E. B. Treat, New York.

Since the first issue of this reference work, ach year has witnessed marked improve-ıents. The thirteenth volume, now before s, surpasses any of its predecessors, and is lue to the conjoint authorship of thirty-eight ırominent medical men in England, on the Continent, and in America. It contains the ırogress of medical science in all parts of he world during 1894, together with a large ıumber of original articles and reviews by .uthors on subjects with which their scientific eputation is identified. In short, the Annual brings the practitioner into direct communication with those who are advancing the science of medicine, and in a way to furnish all that is worthy of preservation.

A COUNTRY SWEETHEART. By Dora Russell. Paper; 16mo; pp. 398. Price, 50 cents. Rand, McNally & Co., Chicago.

This is number 199 of the Globe Library, published bi-weekly at the rate of $7 per year; it is by the well known author of "The Broken Seal," "The Last Signal," "His Will and Hers," etc., and is, moreover, an exceedingly interesting tale with a somewhat complicated plot wherein figure a scoundrelly English squire, a beautiful English country girl, a bigamist, a moral barrister, the mischievous wife of a country squire, and the more mischievous spouse of a country vicar. It is by far the best volume that has yet emanated from the pen of Dora Russell, and of absorbing interest throughout.

URINARY SURGERY. By E. Hurry Fenwick, F.R.C.S., Eng. Cloth; 16mo; pp. 220. Price. 4*s*. John Wright & Co., Stone Bridge, Bristol, England.

This is one of the "epitomes of modern surgical progress" issued by this well known firm, and is a very complete *résumé* of modern literature upon the subject. It deals with surgery of the kidney, ureters, and bladder; electric cystoscopy; diseases of the prostate, seminal vesicles, and urethra. Finally, one of the most valuable features of the work is a complete bibliography arranged for ready reference, and which gives no less than 303 references; also a very complete index.

We recommend this work both for its practical character and the excellence of its illustrations.

THE TRANSACTIONS OF THE ANTISEPTIC CLUB. By Albert Abrams. Linen; 12mo; pp. 205. Price, $1.75. E. B. Treat, New York.

Charles Lamb says "A laugh is worth a hundred groans in any market," and manifestly this is the purport of the volume before us. It certainly is unique, every page being illumined by what the author terms the phosphorescent microbes of sarcasm. It certainly well illustrates by pen and pencil the fads and foibles of modern practitioners.

MANUAL OF SURGICAL ASEPSIS. By Carl Beck, M.D. Cloth; 12mo; pp. 306. Price, $1.25. W. B. Saunders, Philadelphia.

A manual based upon the method employed by the author in teaching in the New York Post-Graduate School.

Therapeutic Brevities.

Opium in Epilepsy.—This is the treatment suggested by Professor Flechsig, of Leipsic. The patient is first given one-half to one grain of Opium, and this is rapidly increased until at the end of the first week he is taking fifteen grains or more a day, in doses of from one to four grains. At the end of six weeks the Opium is entirely suspended, and Sodium Bromide (one-half drachm four times daily) substituted. After these large doses of bromide have been continued for some time, the amount is gradually lowered until the patient is taking less than forty grains a day. It is important that the bromide should immediately follow the suspension of the large doses of Opium.

The plan, however, is not a specific in the treatment of epilepsy, but in almost every case in which it has been tried there has been a cessation of the fits for a greater or less time. A relapse generally occurs in a period varying from a few weeks to a few months.

The frequency of fits after the exhibition of Opium is, for the first year at least, lessened more than one-half. The attacks occurring after the relapse are much less severe in character than those that the patient had been accustomed to.

This treatment is particularly valuable in ancient and intractable cases, but in recent cases of idiopathic epilepsy it cannot be recommended. It is an important adjuvant to the bromide plan as ordinarily applied.

The Opium acts symptomatically, and merely prepares the way for and enhances the activity of the bromides and other therapeutic measures; it also permits the use of any other substances which have a beneficial action in epilepsy.—Doctor Collins, in *Medical Record.*

The Therapy of Phlebotomy.—Diagnosis has been rather overcultivated; the secret processes of deranged physiology have been well mastered, but on the side of therapeutics we have lagged far behind. Too much time has been spent on pathology, and not enough given to the clinical side of medicine.

What proportion of American graduates know how to perform a venesection, to cup and scarify, or apply leeches? Probably none are taught these in their student course; yet, who that has any practical knowledge of the effects of the abstraction of blood can deny its marvellous potency? The venerable Verneuil lately declared, in the French Academy, that since the lancet and wet-cups have been cast aside in pleurisy, and the aspirator come into use, the mortality has enormously increased; from the early stages of this malady blood-letting, local or general, acts like magic. And in the premonitory stages of puerperal convulsions, associated with renal congestion, it is by all odds the safest and most reliable remedy.

It has not been the use but the abuse of blood-letting which has made it unpopular. Fashion is the curse of medicine. In the near past it was almost criminal to operate without saturating the healthy nude tissues with powerful irritants. The antiseptic theory was overdone. Let blood-letting be revived, and employed with judgment and discretion.—*Times and Register.*

Urethral Injections.—The capacity of the urethra has been estimated at from seventy-five minims to two drachms, therefore it is generally held a urethral syringe should not be of greater capacity than one and one-half drachms; but recently it has been shown that posterior urethritis, particularly late in the disease, is far more frequent than was formerly supposed. By experimenting on the living subject, it will be found the urethra will always hold two and a half, and often three to five drachms.

Deep injections are demanded only when definite symptoms amply demonstrate the posterior urethra is involved in the urethritis; as the patient can always tell when the sphincter is forced, this can be readily avoided. To administer, employ a syringe of five drachms' capacity. When it is desired to overcome the sphincter vesicæ, gentle pressure is made, when the fluid will enter the bladder—I have encountered but one case in which the sphincter would not relax. It is better to give the injections when the patient is upon his back. The requirement of an effective injection is that it shall reach the diseased parts, and to secure this a syringe of not less than five drachms' capacity is demanded, and the injection of the entire contents, if carefully done, is easy and causes no inconvenience.—Guiard, in *Annales des Maladies des Organes Génito-Urinaires.*

Bismuth in Large Doses.—The frequent failure of bismuth in the treatment of gastric catarrh is due to the small doses usually administered. With doses of ten to twenty grains a certain proportion does not reach the stomach for some time, being retained in the mouth, pharynx, and œsophagus. This consideration, and the fact that bismuth is almost insoluble, and the danger of poison-

ng therefore very remote, demand the em-loyment, in chronic catarrh, of much larger loses than is customary. In order to free he mucous membrane from adherent mucus, he patient should take in the morning, on n empty stomach, a teaspoonful or less of Carlsbad salt dissolved in about half a pint f warm water; half an hour later a teaspoon-ul well heaped up of the subcarbonate of ismuth in wafer paper—in two parts, the ne after the other, as the quantity is rather arge to swallow at once. The gastric region houfd then be treated to massage for a short ime, in order to bring the bismuth into as lose apposition to the mucous membrane as ossible, and half an hour after the dose reakfast may be taken.—Doctor Pick, in *Berliner Klinische Wochenschrift.*

Hydrocele.—Within recent years Bergman has recommended the only reliable operation or the cure of hydrocele. An incision three o four inches long is made through the tis-ues of the scrotum down to the parietal ayer of the tunica vaginalis. This is care-ully peeled out with the handle of a scalpel r goitre sound, leaving the sac still intact. The cavity is now laid open between two dressing forceps and the parietal layer ex-ised, allowing only that portion which is eflected over the testicle and epididymis to emain. All bleeding vessels are ligated and he cavity carefully mopped out. A drain-ge tube or a strip of iodoform gauze is in-erted into the wound at its most dependent portion, and the edges of the wound are carefully brought together by means of a continuous catgut suture; then an antiseptic dressing is applied, and the testicle kept ele-vated with a good-fitting suspensory bandage. The drainage material is removed on the fourth or fifth day, and the patient allowed to get up at the end of the second week.—*Medical Brief.*

Lancing Infant Gums.—In a paper recently read before the New York Medical Associa-tion, so good an authority as Doctor J. Lewis Smith protested emphatically against the practice of lancing infant gums. The belief still prevails to a wide extent that the cutting of teeth is a common cause not only of pain-ful gums and poor appetite, but also of entero-colitis and other serious maladies which are often allowed to run until beyond the skill of the physician. Our ancestors in the profes-sion are to blame for the widespread impres-sion that much disease is due to dentition, since at one time it was a common custom to incise the gums. We can well get along without any such operation, for if the gums are red and irritated there must be some other condition to account for this irritation. Finally, it is not rational to suppose that nor-mal dentition is to be interfered with any more than any other physiological process.—*The Practitioner.*

Chancroid.—I cured one of the worst cases of chancroid I have seen for years, with Golden Seal. The parts were angry in ap-pearance, enormously swollen, the ulcer spreading, very painful; in fine, this was a forbidding case, one in every respect un-promising. In two days I changed the whole aspect to hopefulness and confidence by the local application of a strong decoction of Golden Seal root and the powdered root. The sore was washed out with the decoction, and then filled with the powder; a piece of lint, wet with the fluid, was then applied over the sore and kept in place with a small, light bandage, wetting the lint with the fluid every hour or two, night and day. The sore healed completely in two weeks.—Joseph Adolphus, in *Georgia Eclectic.*

Menthol in Diphtheria.—F. Kastorsky re-ports thirty-seven cases of diphtheria (all but three in children) successfully treated by painting with a ten-per-cent. alcoholic solu-tion of Menthol. The paintings (by means of a piece of cotton wool) were usually car-ried out three times daily. In some cases, however, a single free application was fol-lowed by complete disappearance of false membranes within two days. A marked im-provement in the patient's general condition was invariably noticed from the beginning of the treatment. The same simple method was successfully practiced in numerous cases of anginas of various forms, and by Trütovsky in a group of cases of scarlatinal diphtheria. —*British Medical Journal.*

Hot-Water Douches.—Doctor Baldy teaches that *vaginal douches* of hot water, as com-monly employed in pelvic or uterine inflam-mations, are positively harmful,—hot water used by the patient in the crouching position simply adds congestion to an already in-flamed part. To derive benefit from the hot water, the patient must be reclining, and use not less than a full gallon at a temperature of 105° to 110° F. Experience teaches that it is impossible to get dispensary patients to ob-serve these rules, and consequently douching is not ordered except for cleansing purposes. —*Philadelphia Polyclinic.*

Tobacco Habit.—One of the very best tonics to take the place of tobacco is said by Doctor Kempf to be a tablet composed of:

Gold and sodium chloride, 0.0025 gramme.
Strychnine nitrate, 0.0011 gramme.
Nitroglycerin, 0.00033 gramme.
Atropine, 0.00033 gramme.
Tincture digitalis, 0 2 gramme.
Oleoresin capsicum, 0.008 gramme.

One four times a day—four hours apart.

—*Practitioner and News.*

Chlorosis.—If both iron and manganese are indicated, do not give in conjunction, but separately and with hour intervals. The best preparation of the former is the muriate tincture, which may be disguised by administration in Seltzer water. Either the sulphate or carbonate of manganese may be employed, and preferably in pill form. The carbonate may be mixed with extract of gentian; the sulphate answers best when mixed with equal parts of iodide of potassium.—*Twerokajhous Porokooskihoff.*

Morphine Hypodermatically.—It is necessary, after giving a hypodermatic injection of morphine, to maintain perfect silence in the room where the patient is lying. Morphine, far from suppressing sensitiveness, like chloroform, rather tends to exalt the excitability, and particularly the liability to disturbance from slight noises. The failure of morphine injections to produce sleep is, in the majority of instances, due to neglect of this simple precaution.—M. HUCHARD, in *Lyon Médical.*

Convallaria.—This drug is capable of slowing the heart's action and of increasing blood-pressure; it is valuable when the ventricles are over-distended and dilatation begins, when there is an absence of compensatory hypertrophy, and when venous stasis is marked. Convallaria acts more particularly on the right side of the heart, and digitalis on the left. Convallaria acts less favorably when albuminuria is present.—DOCTOR ARNDT, in *Pacific Coast Journal.*

Chronic Enlargement of Tonsils.—Where tonsillotomy is objectionable, chronic amygdalitis may be treated with applications of Iodine. The tincture in full strength or in glycerin may be used to good advantage.—*Kansas Medical Journal.*

[Even more satisfactory is a five-per-cent. solution of Zinc Iodide.—ED. AGE.]

Rhus Toxicodendron.—A few years ago, when *la Grippe* made its appearance, the first two cases I was called to see would seize their heads with both hands and groan in agony; but Rhus gave almost perfect relief in half an hour. I have used this drug for twenty years with satisfactory results in frontal headache, in rheumatism that is worse at night, vesicular erysipelas, etc.—DOCTOR D. L. HURD, in *Chicago Medical Times.*

Herpes.—Hutchinson is of the opinion that in Arsenic we have a means of controlling successive attacks of herpes. He cites a case of "herpetiform pemphigus" in which formation of blebs was completely arrested by exhibition of this drug. The disease returned when treatment was intermitted, but a continuance for two years resulted in permanent relief.—*Journal of Cutaneous and Genito-Urinary Diseases.*

Hæmorrhoidal Disease.—The form of piles characterized by sessile granulations which bleed easily, is best treated by the very old method of applying Nitric Acid. Introduce a speculum, dry the parts with gauze, and touch the whole granular surface again and again with a bit of cotton moistened with the acid, but containing so little that it will not run over the parts not diseased.—*Medical Brief.*

Varicocele.—There are many different methods of treatment, but ligation is the most simple and successful, causing but slight detention from business. This may be done either subcutaneously or as an open operation—the latter being decidedly preferable in most cases.—DOCTOR J. J. LAWRENCE.

Gum Boil.—A periodontitis may frequently be aborted by painting the inflamed gums several times a day with a mixture of tincture of Iodine and tincture of Aconite, one drachm each, and Chloroform and tincture of Benzoin, each fifteen minims.—*The Practitioner.*

Sulphur.—Sulphur is recommended as an antiseptic wound-dressing, especially in articular tuberculosis. It is extensively used in Guy's Hospital in this way.—*Revue de Thérapeutique.*

Winter Cough.—*Lippia mexicana* is almost a specific in the hoarse, barking winter cough without secretion, so common in northern climates.—*New York Medical Times.*

Medical Progress.

AN EPIDEMIC OF SMALLPOX IN LITTLE THIBET, AND THE LAMA METHOD OF "VACCINATION."*—Leh, the capital of the province of Ladak, under the rule and jurisdiction of the Maharajah of Kashmir, is an isolated village of 3,000 inhabitants, situated at an altitude of 12,000 feet in a valley one mile long and three-fourths broad, surrounded by huge barren mountains. Being in the region of perpetual snow, the climate is always more or less rigorous—the minimum thermometer often registering −18° F.; nevertheless it is very dry, bracing, and salubrious, corresponding in some measure to that of Davos Platz. Phthisis is unknown in Ladak.

The people are personally very filthy. The men wear the Chinese pig-tail, composed of natural hair *plus* additions of strings, rags, etc., to the "regulation" length; and this tail dangles on the back, making a dirty, black, greasy streak on the garment underneath. Beneath the latter the Ladaki wears his clean or "best" suit. The women are all polyandrists; this fact, together with the *bona fide* celibacy of the Lama priests, maintains an even balance between over-population and the production of the province.

An epidemic of smallpox broke out in the autumn of 1892, during my tenure of office in Leh. Only one previous epidemic, of short duration, had been known in the history of Leh, namely, that of 1877, and the disease was thought to have been stamped out. The exciting cause of the 1892 outbreak was, no doubt, in some measure due to the influx of Kashmiris just getting over the disease, having either caught it *en route* to Leh, or started from Kashmir with the disease on them, spreading it by means of loose scales from the scabs. Every third man in Kashmir is pitted, as during a smallpox epidemic no precautions are taken as to segregation, but the malady is simply left to run its own course, those attacked stoically resigning themselves to all consequences; not the *slightest* care is taken by either relatives or friends to ameliorate or render more comfortable the ill and afflicted.

The Kashmir influx into Leh is usually during the months of July, August, and September, when the passes admit of traveling, and for the time being the capital of Ladak is quite a busy, noisy town and the rendezvous of natives from all parts—from Lhassa and other parts of Thibet, China, Kashgar, Yarkand, Kashmir, and India—for the sale and purchase of their respective wares, such as rich silk, tea, precious stones, skins, dried apricots, "*churrus*" (a kind of intoxicant made from hemp), etc.

The lamas are the spiritual, medical, and temporal advisers of the lay people, who vest in them the charge of their souls and bodies, expecting them to do all that is necessary in order to enter *Nirvana* hereafter—*e.g.*, write out prayers for their prayer-wheels, waft prayers to heaven on their behalf, etc. The onus lies on the people to feed and maintain the lama priests, some of whom are thus exceedingly well off.

The method of vaccination used by the lamas should more accurately be termed *inoculation*. Their method of procedure, based on the erroneous supposition that one attack of smallpox immunizes the patient against a second and subsequent attacks, is as follows: A quantity of virus is procured from a number of ripe smallpox pustules (about eight days old), and is made ready for use by dilution with water in a small earthenware vessel. The instrument used is made of four long needles tied firmly together. This is dipped into the diluted virus, and then rapidly and deeply prodded into the skin and muscle between the thumb and forefinger on the dorsum of one hand only—usually the left. As there are generally some thousands to be inoculated, the operation, in many instances, is done very imperfectly, and, owing to the rapidity with which it is performed, a very small quantity of virus enters a very superficially made wound. This inoculation brings out an attack of variola, which is very mild (owing to the extreme dilution of the virus) and runs a very irregular course. The patient is well in a few days, and imagines that he is now "proof" against any further attacks. An epidemic soon tests this fragile protective fabrication in a most searching and penetrating manner, and, finding it no barrier, no protection against itself, with a ready entrance soon lays its subject low.

During the outbreak of 1892 I was waited upon by a deputation of lama priests to give them permission to hold a public "vaccination" (after *their* method) *in my hospital compound*, whilst I was to stand aside and behold the farce, seeing all my teachings in the art of vaccination set aside and contemptuously ignored. I, of course, resolutely refused their request, and in addition had my lama friends prohibited by law (through the kind help of the British Joint Commissioner to Ladak and the Dewan of Lep) from carrying on their nefarious practice in public. At the same time I announced publicly that I would

*John E. Danenburg Jones, M.B., C.M. (Aberdeen), in the *Indian Medical Record*.

perform a different kind of vaccination upon such as cared to undergo the operation.

On application to the Residency Surgeon, Kashmir, I received nineteen tubes of vaccine lymph, which were forthwith used. The results were watched with very great skepticism, suspicion, and curiosity on all sides. I was doomed to disappointment, and to ridicule by the lama priests, for not a single vesicle rose, the lymph being utterly inert; the whole thing seemed like "playing at vaccination," and when the lamas compared their *tangible* with my *negative* results they wisely shook their heads and condemned the new vaccination summarily. This was, of course, only what could be expected under the circumstances. I felt defeated, for failure just at the threshold of the introduction of a new method and system of vaccination in a strange country, where superstitious notions prevail concerning it, was of all things most undesirable.

I, however, communicated these facts to the Residency Surgeon, and wrote for a supply of fresh lymph. This time I received thirty-two tubes, and was again ready for vaccination. *But!*—would any one venture after such a miserable exhibition of failure? Would any have faith in me and my vaccination to trust themselves to a second experiment? These were questions that vexed me the whole of the night after reception of my second supply of lymph. The next morning my hospital assistant, the caretaker of the hospital, and many of the Christian community, came forward to be vaccinated, as also some out-patients at the dispensary. The operation was a grand success *this* time, and was praised by all, especially in that no *general* eruption broke out over the body and face, as is the case after a *lama* "vaccination."

After all the lymph from the tubes was utilized, we carried on vaccination from arm to arm. Thus the fame of the "new vaccination" took deep root in Leh itself, and rapidly spread among the outlying villages. Delegates were sent to us daily, praying us to visit their respective villages and perform the "new vaccination." These solicitations we acceded to as far as possible, and as soon as leisure was had at headquarters I set out itinerating, first among the neighboring villages, and afterwards among further outlying ones, until in all upwards of 2,000 cases of *successful* vaccination were recorded.

During the epidemic I had a house placed at my disposal for a hospital, but many small-pox patients preferred living in tents put up in rude Ladaki fashion. With every precaution used, it was very difficult to segregate the patients. It was painful to see case after case of variola come in, previously "vaccinated" by a lama, the attack not in the least modified by the "vaccination." Some came in with the disease on them *for the second and third time!* On the other hand, there were two or three cases that had been *genuinely* vaccinated in the arm by the same surgeon, years previously, and in these it was interesting to notice the very *modified* nature of the variola—only about a dozen vesicles, about the face and body, which lasted but a few days, the patient convalescing rapidly. Comparing these cases with those "vaccinated" by the lama method, and the lamentable mortality attending the latter, the result in *every instance* was most satisfactory; the former escaped with but a very modified attack.

Such were the nature and general features of the epidemic of 1892, which began in August and lingered on till very near November, solely because it was impossible to segregate the cases, especially those occurring among the "purdah" women and their families. The mortality was very high, being fully fifty per cent.

Anent Baking Powders.—A baking powder made of cream of tartar and bicarbonate of sodium leaves only Rochelle salts in the bread; one composed of tartaric acid and bicarbonate of sodium leaves only tartrate of sodium. Another compound, of acid phosphate of calcium and bicarbonate of sodium, will leave in the bread reverted phosphate of calcium and phosphate of sodium; and still another, manufactured from alum (dried ammonia alum is the kind ordinarily used) and bicarbonate of sodium, will leave hydrate of aluminium, sulphate of sodium, and sulphate of ammonium. If sesquicarbonate or bicarbonate of ammonium is used as a baking powder, which is sometimes done by bakers in making their finest cakes, the only residue left in the bread will be possible traces of ammonia, as the carbonates of ammonium are completely volatile in the heat of an ordinary cooking-stove.

There have been many conflicting statements made by the manufacturers of various baking powders. To believe them all would be to give up baking powders altogether, as most of them make the most astounding statements in regard to the goods of their competitors.

In judging the merit of the different baking-powder claims, there are some important facts which bear heavily upon the subject and may influence a manufacturer's mind very decidedly in some cases. In the first place, cream of tartar is a harmless salt,

which separates from grape-juice when the latter is made into wine. Tartaric acid is made from cream of tartar, and is the acid of grapes. The residue left by either of them in the bread by their action on the bicarbonate of sodium, being mildly aperient, is inclined to correct indigestion. A powder made with either is considered an excellent one, but cream of tartar and tartaric acid are expensive substances. Acid phosphate of calcium is cheaper than cream of tartar or tartaric acid, but leaves reverted phosphate of calcium, as well as the gently purgative phosphate of sodium, in the bread. Alum baking powders are usually made with thoroughly dried ammonia alum; on using such a powder the bicarbonate of sodium decomposes the alum into hydrate of aluminium, sulphate of sodium, and sulphate of ammonium. Dried alum is cheap when compared with cream of tartar or tartaric acid, costing about one-fifth as much—it is also known as "burnt alum," and is used on account of its cheapness. The carbonates of ammonium are not used to any great extent in baking powders; they have been used in one or two instances in small quantity to increase the leavening power, but, having found none in recent analyses, their use has probably been dropped, in anticipation of a prejudice that might be stirred against the use of any form of ammonia by the unreasonable attacks of interested manufacturers seeking to push their own less efficient combinations.

Dried alum, when not decomposed by bicarbonate of sodium, is poisonous, no doubt; a fatal case being on record where death was produced by one ounce of it being taken by mistake for Epsom salts.—*Food and Sanitation.*

Scientific Anæsthesia. — The view is slowly but surely gaining ground that death under chloroform is to a great extent a preventable accident; indeed, no other conclusion can logically be drawn from the frequency of fatal effects in patients who are for the time being under the empire of a lethal drug administered in a haphazard, hope-for-the-best fashion—in a manner, forsooth, which would never be tolerated on the part of a dispensing chemist engaged in manipulating an admittedly dangerous substance. We do not hand a patient a toxic dose of strychnine, hoping to be able to prevent him swallowing more than is good for him after he has put the draught to his mouth, nor ought we to run the risk of allowing a patient to inhale a vapor of unknown and undeterminable strength. It is obvious that by the ordinary rough-and-ready method of administering chloroform the anæsthetist can only form at best an approximate idea of the dilution of the vapor or of the absolute amount that is entering the patient's lungs, and he is constrained to regulate the administration by the observed effects—that is to say, when it is possibly too late to avert the effects of an overdose already circulating in the blood. Long experience and close observation may enable trained anæsthetists to follow this plan with comparative safety, but even this measure of safety cannot be obtained by the practitioner who is called upon to administer chloroform too seldom for his personal experience to enable him to define the danger limit. The matter would long since have been placed on a more scientific basis were not coroners' juries handicapped by the fact that they are unable to discuss the expert evidence brought before them, the more so as in every respect but that of measuring the amount administered every precaution has usually been taken. Reforms are notoriously slow to come from within, but this is really a matter which calls for some action on the part of duly recognized medical authorities. If an authoritative opinion in this direction were forthcoming from persons whose position would command respect, a useful impulse would be given to the adoption of a more rational method of administering anæsthetics, especially chloroform. We fear that it is idle to look to professed anæsthetists to lead the way. Each is wedded to the method which, thanks to long training, has stood him in good stead, and does not hesitate to proclaim the maxim "anæsthetics for the anæsthetists," which, however true in substance, is for the most part quite impracticable. It is not that there is any lack of apparatus which permit of the administrator controlling the amount of chloroform passing into the lungs. The reluctance to make use of such apparatus is simply the outcome of an indisposition to take the trouble to become acquainted with the slight amount of practice required for their proper employment.—*Medical Press and Circular.*

Anæsthesia in Veterinary Medicine.—The employment of anæsthetics has made slow progress in veterinary practice; expense, trouble and time being usually the pleas offered for their non-adoption. A number of veterinary surgeons, however, resort to them on every possible occasion, and, putting the avoidance of pain on one side, testify to the advantages they derive from them; indeed, there are some operations that cannot

be attempted with any hope of success unless the animal be under the influence of an anæsthetic. Even in cases of difficult parturition, partial anæsthesia, especially in the mare, is found to be most advantageous in effecting delivery.

Of all animals the horse is the one to which chloroform can be most safely administered; in fact, it is sometimes an arduous task to destroy this creature by inhalation of the drug. It has been given to hundreds—it might be said thousands—of horses, almost undiluted with air, and with absolute impunity. But some veterinary surgeons imagine that there may be danger in this rapid anæsthesia, and advise the mixture of chloroform and air, which, if it requires a longer time to produce the necessary degree of narcosis, is safer.

However this may be, it is gratifying to find that attention is being increasingly directed to this matter; and among those who have distinguished themselves in this direction, and have labored to dispel the prejudice which still opposes the use of chloroform, must be named Mr. Wallis Hoare, F.R.C.V.S., Cork, who, in advising the dilution of chloroform vapor with air during inhalation, has improved on the ordinary apparatus by a modified bag and foot-bellows, which appears to be easily worked and effective. For adult horses the quantity of chloroform required in this apparatus is from one and a half to two ounces, the time occupied in producing complete anæsthesia varying from ten to fifteen minutes, and Mr. Hoare regards loss of muscular power in the limbs and loss of sensation on striking the animal firmly on the quarter as the best indications of the proper stage at which operations may be commenced. Mr. Hoare is evidently an enthusiast in this humane practice of veterinary surgery, and it is earnestly to be hoped that his example may be largely followed; for though all animals should receive merciful consideration when they have to undergo operations, surely none of them is more entitled to this than the horse, whose muteness under the infliction of pain seems to lead people to think that he suffers but little—a grave error, but one which has caused him to be more abused and tortured than all the others put together.—*The Lancet* (London).

Unjustifiable Surgery.—Some time ago a professor in a medical college related the following: A surgeon lecturing in said college visited his office to request his influence in inducing a colored man (an old family servant) to go before the class and have a surgical operation performed. The first mentioned physician replied that the operation was unjustifiable, in his opinion, for the reason that the growth was a malignant one so far advanced as to render any operative interference useless. Said the surgeon in response: "Why, of course, the operation would do no good, but the case would make *such a splendid clinic.*"

Whether the story was told in truth or jest, it points a moral. It cannot be denied that many operations are performed upon patients who are compelled to go into charitable institutions, that were best let alone. Within a very short time there were performed, in the operating-room of one of the largest hospitals in the East, three surgical operations during one afternoon, each one predicated upon a false diagnosis, and each one plainly unjustifiable. But this unwarranted surgery is not confined to public hospitals and charitable institutions. One has only to attend a few meetings of medical societies wherever held, to be convinced that many cases occur in private practice or private hospitals that would have been better if left alone, as will appear upon close criticism of the reports made. . . . .

A lady recently seen, fresh from a surgeon's hands, was minus her womb, ovaries, tubes and two inches of her rectum. It is fair to say that the gentleman who did the operation was a homœopathic surgeon, and the diagnosis in the case was a displaced uterus accompanied with reflexes. This being *homœopathic* surgery, what *organs* would have been left had she engaged a regular surgeon to operate, who would *cut* in proportion?

To our shame it is said that we are given to *fads* even in surgery, and that these soon *die*, as do the patients. "Be sure you are right, then go ahead," is the wise maxim of the honest surgeon, and in his hands neither the poor nor the rich will suffer. A surgeon should be a man of firm convictions, 'tis true, but these convictions should be tempered with a good knowledge of what he is doing and with a feeling of pity for the afflicted.—*Mathews' Medical Monthly.*

Offspring of Young Mothers.—At the Congress of Hygiene, Doctor Korosi, of Budapest, stated that the proportion of deaths among children from weakly constitutions, or maladies traceable to the mother, was twice as large among the children of mothers under twenty as among the children of mothers over thirty, upon a comparison of several thousand cases.—*Sanitary Era.*

The Medical Age.

VOL. XIII. DETROIT, JUNE 10th, 1895. NO. 11.

Original Articles.

BILIOUS REMITTENT FEVER OF THE TROPICS.

BY DOCTOR JOAO VINCENTE TORRES HOMEM.*

Although the severe bilious fever of the tropics sometimes presents the intermittent type, especially at its commencement, still the remittent is without any doubt the form most commonly observed in Brazil, as in other countries; I have therefore selected the denomination which forms the title of this paper. The same pyrexia is also known under the names of: *Great Endemic Fever of Tropical Climates; Hæmaturic Bilious Fever; Nephrorrhagic Bilious Fever; Ictero-Hæmorrhagic Fever; Icteric Pernicious Fever;* and *Yellow Fever of the Acclimated* (in Guadeloupe).

No one has better than Doctor Dutrouleau defined the pyretological species of which I treat, and distinguished it from all the morbid conditions with which it may be confounded. This definition, which I adopt throughout, is thus couched:

By bilious fever of the tropics is to be understood a pyrexia which, without regard to type, and able to assume all types, presents as its essential and oftentimes unique characteristic the marked and persistent symptoms of the bilious condition: jaundice, vomiting, the stools and urine characterizing this condition, and, as grave characteristics, the cerebral, hæmorrhagic, and other phenomena attributable to change of the blood by bile.

In this definition the practical physician finds the differences separating the bilious fever of the tropics from intermittent or remittent fever attended by some transitory bilious symptoms; from hepatitis followed by fever and jaundice; from jaundice dependent on catarrh of the bile ducts and complicated by irregular intermittent paroxysms; and from the grave febrile jaundice also known by the name of acute atrophy of the liver.

Bilious remittent fever is a frequent disease in the tropics, chiefly during the summer; it attacks by preference persons dwelling in the city who expose themselves to the heat of the sun and commit abuses of diet and stimulation; is rarely preceded by simple intermittent fever; and almost never supervenes in the course of malarial cachexia. Out of forty-three cases which I have carefully observed, only once did the disease appear in a cachectic person; all the others were attacked when in the enjoyment of perfect health; in the exceptional instance the bilious fever seized upon its victim twenty-four hours after arrival in the city. In the great endemic malarial centres, which are now met with only outside the city, and more particularly outside the *municipio neutro*,* tropical bilious-remittent fever is very rare. A distinguished colleague and great observer who had an extensive practice in the town of Itaguahy during twenty-two years, met with only five cases of this pyrexia, while 75 per cent. of the patients he had seen suffered from other diseases due to the malarial miasm. Out of thirty-seven patients observed in the hospital wards whose clinical records are preserved in the archives of the University and were thence extracted by me, only two came directly to the hospital from a notoriously marshy locality—one from Belem (Para.) and the other from Villa Nova,—and neither suffered from cachexia. I do not mean to infer from this that the pyretological

*Translated by Surgeon Geo. P. Bradley, U. S. Navy.

*A term applied to a quarter of Rio de Janeiro embracing the oldest settled portion.—TRANSLATOR.

species in question is independent of malarial infection; on the contrary, I believe that bilious fever of the tropics is due to the combined influence of two morbid elements—the bilious, proceeding from the slow action exerted upon the hepatic functions by the climate, which impresses upon the disease a special stamp; and the malarial, denoted by the concomitant lesion of the spleen, and by the unavoidable necessity the physician is under to resort to large doses of quinine in order to relieve his patients. Still more, the influence of malaria becomes patent in many cases where regular paroxysms of intermittent fever appear at the end of the bilious fever, when the patient is already rid of the principal disease and is about to become convalescent, just as happens with other manifestations of malarial poisoning.

The bilious fever of the tropics frequently begins with an intense chill, followed by great febrile reaction which coincides with symptoms of indigestion; the patient vomits whatever food may be contained in the stomach, and a few hours later is attacked by profuse diarrhœa. In other cases no symptom of digestive disturbance is observed during the first twenty-four or forty-eight hours; after the initial chill, heat appears as in a paroxysm of simple intermittent; the fever assumes the more or less frankly remittent type, and only later on are manifested the special symptoms of the bilious condition.

The febrile heat of the disease is characterized in the beginning by the rapid rise of temperature, which goes up to 106° and even 107° at the end of the first twenty-four hours. In the milder cases the remission, which ordinarily occurs in the morning, causes the thermometer to fall a degree or more (Centigrade); in grave cases the oscillations of temperature do not go beyond five to eight tenths of a degree. It is not rare to observe at the hour of febrile exacerbation the appearance of shivering, preceded or not by some sweat, manifest on the forehead or neck and coinciding with the period of remission.—Case 1 gives an example of this.

On the second day of the disease, rarely before and sometimes after, a jaundiced color of little intensity appears in the ocular conjunctiva, in the naso-labial regions, chin, lateral aspect of neck, and upper part of chest.

The pulse ordinarily accompanies in fre quency the oscillations of temperature; almos always hard and full in the beginning of th disease, it beats 95 to 120 times per minute Headache appears at once, often attended b insomnia and restlessness during the night.

In females, in children, and in males o marked excitable and nervous tempera ment, delirium occurs on the second or thir day—generally mild and consisting of som disconnected words which the patient stam mers spontaneously or when questioned; thi delirium becomes more perceptible toward night, when the fever reaches its maximu intensity. The tongue is from the com mencement covered with a thick coat c yellow fur, and tends to become dry. Ther is very intense thirst, complete anorexi nausea, and commonly vomiting.

After the expulsion of the food containe in the stomach, that organ throws off a larg amount of bile whenever the patient vomi —sometimes of a yellow color, sometime greenish, and in the majority of cases dark- which is also mingled with the ingested fluic and the gastric mucus. When in the bil present in the stomach there is a large quan tity of dark pigment (cholepyrrhin), and is cast out mixed with the water which th patient drinks in great amount, the vomite matter, after standing for some time in large-sized vessel, resembles that of yello fever. Constipation, which is customaril observed in the first forty-eight hours, is re placed by a profuse bilious diarrhœa fro the third day on, and the stools appear eithe scarcely tinged with yellow, or entirely com posed of thick aand viscid bile, which stai the sides of the vessel receiving it. Th belly becomes tense, doughy, tympanitic, an painful on pressure, especially in the hepat region. The liver attains great size in all i diameters; it extends one and a half to tw and a quarter inches below the right cost margin, and rises to the level of the fifth c fourth rib of the same side; the correspon ing hypochondrium becomes prominent, an is very sensibly defined from the oth regions of the abdomen. The spleen i creases in size, and the splenic region, whe compressed, is painful; with us, althoug splenic hypermegalia (pot-belly) is usual observed, still it is manifest in a much le

legree in bilious fever than in the other malarial pyrexias. The urine, scanty and high-colored, especially at the beginning of he disease, appears later on overloaded with ile-pigments, becomes thoroughly bilious, nd still farther on (after the first week) con- ains a large amount of albumen. In the espiratory system no abnormal sign on aus- ultation and percussion is ordinarily found n the first few days; the patient neverthe- ess has dyspnœa, which goes on progres- ively increasing in proportion as the disease uns through its natural course.

It is thus that a severe bilious remittent ever behaves in Rio de Janeiro in the first ew days. The disease goes on, and whether : ends in death or by recovery the exciting ymptoms acquire fresh intensity, some of hem experience a great change in their ature, and symptoms of another order ap- ear, investing the pyrexia with the most xtreme gravity. The jaundice, which was artial and but little prominent, becomes ery marked and invades the entire skin; dynamia appears; the patient's countenance xpresses great prostration of strength; the ubdelirium is more continuous, and from me to time is interrupted by stupor; sub- ultus tendinum, carphologia and crucidis- ius are noted; the pulse loses force and is ore frequent (125 to 130); the febrile heat ffers no perceptible modifications — the orning remissions are less appreciable; the ongue becomes tremulous and dry, the fur overing it blackish; the bilious vomiting con- nues with the same frequency or becomes rer; diarrhœa almost always increases, and ids greatly to increase the adynamia; the rine acquires a dark deep color like that of offee; the belly is tympanitic; the liver, and ie spleen as well, still more enlarged.

At this advanced stage of the disease, ordi- arily at the end of the first week, sometimes idway in the second, some passive hæmor- ages occur, by reason of the cholæmia hich attains its maximum development. he greater frequency of hæmaturia ob- rved in these cases is the origin of two enominations by which the disease is known some countries, viz.: *Hæmaturic Bilious ever*, and *Nephrorrhagic Bilious Fever*.

Epistaxis, which is not rare as an active æmorrhage in the first forty-eight hours, man- ifests itself in many cases when poisoning of the blood by bile takes place. Gastrorrhagia, though very rare, has been observed in two patients in the Mizericordia Hospital; this symptom occurred in a very evident manner (Cases 2 and 3), and in one of these patients I also observed enterorrhagia. Hæmaturia, metrorrhagia, epistaxis, gastrorrhagia and enterorrhagia are the only hæmorrhages I have observed in the grave bilious remittent fever of Rio de Janeiro, and I mention them in the same order of frequency with which I have met them. In a lady residing in the Rua da Imperatriz (Case 4), metrorrhagia, which supervened on the sixth day of the disease, was so copious that it hastened her death by several hours.

While it is true that hæmaturia is the most common of hæmorrhagic manifestations in grave bilious fever, even in Rio de Janeiro, it is no less true that with us the flow of blood from the kidneys is observed very much more rarely than in other countries. Doctor Dutrouleau says that bloody urine appears even in the first days of the disease in Senegal; that in the Antilles especially, almost all the patients lose a great amount of blood by the urine, as soon as jaundice becomes very intense and general. But of the forty-three cases I have observed, only in five was hæmaturia present—in two hos- pital patients the dark color of the urine led me to believe that it contained blood, but chemical and microscopical analysis demon- strated that I was deceived by the enormous amount of cholepyrrhin which this fluid contained, and which dyed it black. Among the five cases of hæmaturia figures the pa- tient who expired immediately after a pro- fuse uterine hæmorrhage; in the remaining four cases the nephrorrhagia was not accom- panied by other hæmorrhagic flux.

The hæmorrhages in grave bilious fever ordinarily coincide with the appearance of very exaggerated ataxo-adynamic symptoms; this pathological dualism is caused by the poisoning of the blood by the principles of the bile. The effect produced upon the medulla by this profoundly charged blood explains the dyspnœa in some patients and the epileptiform convulsions met with in others (Cases 5 and 6).

The disease pursues its course, and gradu-

ally reaches its last stage. Adynamia reaches its extreme point; the patient, lying upon his back, can barely make some partial movements,—sometimes he remains in a more or less deep lethargy, sometimes presents continuous subdelirium, uttering in an undertone a long series of incomprehensible and disconnected sentences (typhomania); he does not know his dearest friends, and is seemingly utterly indifferent to what is passing in the outside world; the skin and oculo-palpebral conjunctiva are of a deep yellow, slightly greenish, color; in some cases blackish spots are observed, similar to ecchymoses, of variable size, shape, and arrangement, scattered over the thoracic and abdominal wall, as well as on the upper and lower limbs; the tongue, dry and retracted, is sometimes of a dark color, sometimes cleft longitudinally, and from the fissures flows black and diffluent blood; the gums also occasionally give forth blood, and the teeth are coated with sordes. In consequence of this condition of the mouth, the patient's breath is fœtid and repulsive.

Vomiting, though more rare in this last stage, occurs from time to time, especially when the stomach receives a large amount of fluid or any medicine locally irritant; the diarrhœa continues and becomes much more profuse and frequent, and it is not rare to observe enterorrhagia—in which case the blood is either greatly altered by mixture with bile, or the stools are entirely bloody. The liver is of large size, the spleen as well; and pressure in the right hypochondrium causes the patient pain, which he evinces by groans or contractions of the face. The urine either appears bloody, with the dark red of altered venous blood, or is overloaded with bile-pigment and resembles a very weak infusion of coffee.

In the midst of such profound disturbance of innervation and of the blood-crasis, the patient some hours before becoming moribund still has a temperature above 103°,—it is only when coma appears, preceding death by a few hours, that the temperature rapidly decreases, marking 96.8° or less, the pulse becomes very rapid, the extremities icy, the skin is covered by profuse clammy sweat, and the patient thus expires.

This description of the symptoms presented by grave bilious fever of the tropics is applicable to the majority of cases, but not to all. The gastro-hepatic phenomena, the jaundice, ataxia and adynamia are constant, and the character, course and remittent type of the fever almost never vary; but the hæmorrhages are not met with in many cases, and, excepting hæmaturia, which is manifested in the larger number of patients, the absence of hæmorrhagic fluxes constitutes rather the rule than the exception. Albuminuria, which likewise attends the patient to his death, and which is observed independently of hæmaturia, is a far more constant symptom.

Death ordinarily supervenes at the end of the eighth or tenth day; rarely when this termination occurs does the disease reach the limit of the second week. When recovery takes place, as happens in the greater part of the cases, convalescence becomes well marked only after the fifteenth or twentieth day of the disorder.

In a case observed in the hospital (Case 5) it was only at the end of the second week that the hæmorrhagic and ataxo-adynamic symptoms disappeared; it was thirty-two days after the initial chill that the patient was able to leave the hospital, still retaining very manifest tokens of the jaundice. If the termination is to be favorable, the disease becomes stationary in its course for the space of three or four days; the morning remissions of the fever then begin to be more marked and the evening exacerbations less exaggerated—in the morning the thermometer indicates 100.5° to 101°, and in the evening 102°; the temperature keeps gradually approaching the normal; the nervous phenomena, commencing with delirium, cease; at the same time vomiting disappears and diarrhœa diminishes, the tongue grows moist from the tip to the base, and the yellowish fur that covered it clears off in the same manner; the liver and spleen lessen in size; the urine loses the intensely dark color it had, and becomes yellow (yolk-of-egg color); improvement progresses day by day; all the symptoms disperse, except three, which persist during many days, viz.: jaundice, loss of appetite, and prostration of strength—the former especially attends the patient during convalescence, and it is only after a long

time that it entirely leaves him. I have also observed during convalescence, in some cases, the appearance of muscular and articular pains of rheumatic character, that are more often referred to the upper and lower limbs.

Of the thirty-seven cases of grave bilious fever observed in the hospital wards in the period of ten years, thirteen terminated fatally, and twenty-four recovered. Autopsy, performed in nine cases, revealed the following lesions:

Very deep yellow color of integument of corpse in all. Complete rigor mortis in five; relaxation of limbs in four. Numerous and extensive ecchymotic spots in one; very confluent petechial spots in one; blood-stains on outer surface of upper lip in one. Venous injection of meninges and encephalon in seven; large yellowish serous effusion in lateral ventricles of brain in one; yellow color of organs contained in cranial cavity in all. Hypostatic congestion of base of both lungs in five—in one of these there was miliary tuberculosis of the upper lobe of the right lung. Effusion of some yellow fluid in cavity of pericardium in three cases; softening of heart tissue in two; excentric hypertrophy of left ventricle in one; fatty degeneration of ventricular walls in two. Accumulation of dark bilious fluid in cavity of stomach in four; of bloody fluid in one; stomach entirely empty in two; hyperæmia of gastric mucous membrane in seven, very pronounced softening of this membrane in one; hyperæmia of mucous membrane of duodenum in three, of jejunum and ileum in one, of transverse colon in two. Liver enlarged in all; enormously congested in five; yellow throughout its parenchyma in two. Gall-bladder filled with thickened and black bile in six; entirely empty in one; containing a little fluid in two. Spleen very large and softened in two; a little enlarged and softened in five; of normal size and consistency in two. Kidneys congested and enlarged in four; slightly hyperæmic in two; apparently normal in three. Bladder containing urine in all, in some more, in others less; urine bloody in two, albuminous in three, loaded with coloring matter of bile in seven. I met in no case with the hæmorrhagic foci of the kidneys of which some pyretologists speak, not even in those two cases where the fluid in the bladder evidently contained blood, there having been hæmaturia during life.

It results from the autopsies in question that the stomach and liver are the two organs most frequently and most severely compromised; hence certain of the older physicians (Stoll, Pinel, Bouilland) were quite right in considering this disease as a gastro-hepatitis complicated with jaundice. If they had recognized and admitted the influence of the malarial miasma in the development of this morbid entity, the conditions peculiar to hot climates concurring powerfully as predisposing causes to this end, they would have stated the entire truth.

There are barely two diseases which can be confounded with the grave bilious fever of the tropics, viz.: Yellow fever, and parenchymatous hepatitis, the latter also denominated *acute atrophy of the liver*, *grave jaundice*, and *hæmorrhagic jaundice*. The first is very frequent with us, has appeared at various times in the epidemic form, and has latterly become endemic; the second is very rare, and pertains more especially to the nosology of cold climates.

In my paper upon Yellow Fever (Medical Age, 1894, pp. 609 *et seq.*) will be found stated the differences separating the two pyrexias, hence I shall here treat solely of the marks distinguishing parenchymatous hepatitis from bilious fever.

The former of these affections is not due to malarial poisoning, is much more frequent in woman than in man, is commonly observed during pregnancy, and ordinarily provoked by venereal excesses, by abuse of alcoholic drinks, by bad hygienic conditions inherent to a life of debauchery and poverty, by depressing passions, and by the previous occurrence of typhoid or typhus fever; in some cases it appears secondarily in the course of pneumonia, acute miliary tuberculosis, typhus, or other grave disease. A genuine parenchymatous inflammation (in the strict acceptation of the word, acute atrophy of the liver) is characterized in the anatomico-pathological point of view by an exudate occupying the interior of the hepatic cells, which, distended and strangulated by it, lose their proper functional and vital activity. In almost all cases there is, as a concomitant, an interstitial exudate, which occupies the

periphery of the lobules of the liver and compresses the origin of the biliary canaliculi, whence results an early jaundice by reason of insufficiency of excretion and resorption of the secreted product. (Frerichs.) The infallible consequence of the atrophy of the cells is suppression of function; and it is this suspension of the hepatic function in regard to the biliary secretion (acholia) that constitutes the entire peril of the disease and accounts for the contrast noted between the symptoms of the first and those of the second phase of the morbid process. As long as only the initial lesion exists, before the atrophy takes place, the patient's condition shows no apparent gravity—nothing denotes imminent danger; but the atrophic stage manifests itself, and at once appear with great intensity the toxæmic and nervous symptoms (ataxia and hæmorrhages).

Diffuse hepatitis and gastro-duodenal catarrh are ordinarily revealed during the first few days of the symptoms proper, and in this period nothing in the condition of the patient indicates gravity. The fever, which appears without preceding chill, is always moderate; the thermometer never rises above 101.5°–102.2°; the progress of the pyrexia is not in accordance with the frank remittent type; and there are cases in which the morbid process runs through all its stages without genuine fever occurring.

Twelve or fifteen days after the beginning of the disease appears a jaundice of little intensity, that remains mild for the space of many days, and becomes very marked and grave only after the work of atrophy of the liver has commenced, when acholia occurs.

In cases where there is a temperature of 104° or more, this exaggerated heat coincides with the appearance of ataxic and hæmorrhagic symptoms, and is connected with the presence of bile-poisoning of the blood. Even when this high temperature occurs, well marked morning remissions are not observed, the thermometer barely falling three or four tenths of a degree (continued type). In the toxæmic stage of the disease there is almost always delirium, coma, and convulsions; palpation and percussion demonstrate that the hepatic gland is reduced in size and the spleen very much enlarged; the bowels are obstinately constipated, and evacuations produced by purgatives and enemata are deprived of bile and present a color like that of clay.

From the distinguishing characteristics to which I have just referred, it is impossible for an experienced physician to confound bilious remittent fever of the tropics with atrophic parenchymatous hepatitis. The ætiology, pathogenic conditions, symptomatology, progress of morbid phenomena, and results obtained with quinine, in the one and in the other of these two affections, will suffice to clear up the diagnosis.

Bilious fever of the tropics, whatever the type it assumes, is a grave disease. This gravity, admitted by all pyretologists, and recognized by myself in Rio de Janeiro, is due to combination of the ætiological elements. The malarial element exercises upon the climatic element an aggravating effect, and thus combined they give rise to the complex pyrexia in question; simple bilious fever, non-malarial, in whatever climate it develops, is always a benign complaint. The remittent type of the fever, moreover, constitutes an unfavorable element in prognosis, and the continued type is still more unfavorable. The frank intermittent type, the rarest of all, is that which renders the disease less grave. The early appearance of the ataxic symptoms and hæmorrhages, the previous existence of malarial cachexia or of any other manifestation of malarial infection, and the lack of specific medication during the first few days of the malady, are circumstances that greatly aggravate the prognosis.

The fundamental indications in treatment are: To combat the bilious symptoms of the first stage, facilitating by all methods the prompt excretion of bile and preventing its accumulating in the hepato-biliary organs: To combat the basis of the disease, by opposing an antidote to the miasmatic poisoning which determines the functional and anatomical derangements in these organs: To neutralize the effects of the toxæmia due to the elements of bile, and to purify the blood of these noxious elements and restore its normal crasis.

To attain the first desideratum, the physician should have recourse to local bloodletting if there is noteworthy congestion of the liver; to emetics, especially ipecac, and

calomel in purgative doses; to the neutral salts, especially sulphate of magnesia or sulphate of soda; and to diuretic ptisans of which nitrate of potash, acetate of potash, or soluble cream of tartar forms a part.

To fulfill the second indication, there is no other efficient means than the muriate or valerianate of quinine, so administered that it shall be promptly and easily absorbed, modifying its local action upon the stomach by the correctives well known in therapeutics.

To fulfill the third indication, resort must be had to tonics and diffusible stimulants—against adynamia; to antispasmodics and the cutaneous revulsives—against ataxia; to the astringents, particularly the perchloride of iron—against hæmorrhages; to the vegetable acids, especially citric acid—against the diffluence of the fibrin dependent on cholæmia.

Such are the means I have employed in grave bilious fever, varying them, diluting them, combining them in different ways, according to the special circumstances of each patient. In almost all the cases observed in the hospital wards, I used wet cups in the hepatic region; in two I applied leeches to the verge of the anus, because the congestion of the liver was enormous, the patients felt great pain in the right hypochondrium, and both had a temperature over 104°.

I never resorted to general bleeding, and think this should be reserved for certain very exceptional cases in which in the first days of the disease great hyperæmia of the meninges and brain coincides with high fever. In using local blood-letting, especially by means of leeches, the practitioner ought not to lose sight of the toxæmia which will manifest itself by ataxo-adynamic symptoms and at times by hæmorrhages as well. Six or eight wet cups to the hepatic region, and possibly in some cases the same number of leeches to the verge of the anus, is the procedure when I deem it necessary to unload the liver by taking blood; I rarely exceed this limit.

If the tongue is very much furred, if there is nausea or even vomiting from the beginning—as is the rule,—I make use of ipecacuanha—two hundred grammes of the infusion holding in suspension two grammes of powder. After obtaining emetic action, I give one gramme of calomel in three doses—one every two hours. And it is only after the patient has vomited and purged freely that I begin to give quinine, combining it with extract or tincture of rhubarb, according to the formula preferred. At the same time I put the patient on a diuretic drink, into which enter two grammes of nitre and eight grammes of soluble cream of tartar. When the stomach does not tolerate quinine, as frequently happens, I administer this drug by enema (Cases 2 and 3).

This treatment is continued during the first stage of the disease—that is, so long as only the bilious symptoms, accompanied by frank febrile reaction, are present. As soon as ataxic phenomena appear, if these phenomena are dependent upon cholæmia, I make use of stimulant and antispasmodic mixtures, and give the patient acid lemonades in large amount. Cinchona, musk, ether, valerian, carbonate or muriate of ammonia, and canella, are the means I prefer, sometimes one, sometimes another, according to the effect obtained, and almost always attenuating them with a few spoonfuls of good wine. Orangeade, lemonade of lemon, of lime, of *caja*,* or of tamarinds, strongly acidulated and at times iced, are the acid drinks to which I give preference, according to the resources available and the patient's choice.

If hæmorrhages appear and are profuse, I have recourse to astringents, chiefly gallic acid or perchloride of iron; but if the loss of blood is of little account, as is the general rule, I use no direct medication against it, but press the iced lemonades, and apply compresses of ice-water to the region corresponding to the organ which is furnishing the blood.

If the patient, after getting out of danger, or during convalescence, has paroxysms of intermittent type, I again give quinine, in combination with *Agua de Quinia*.

I must now impress upon the physician the necessity he is under of resorting to quinine at the earliest possible moment, and of giving this drug in large doses, proceeding just as he would proceed if he had to subdue a

*The fruit of a species of Spondias—refrigerant and diluent.—TRANSLATOR.

violent pernicious attack. If the opportunity escapes—if the quantity of the remedy is insufficient to combat the miasmatic poisoning—the patient's condition will become far more grave later on; his symptoms will be under the pernicious influence of two poisonings—the cholæmic, which supervenes in consequence of the entrance into the blood of the active principles of the bile; and the malarial, which still persists, inasmuch as it has not been neutralized and therefore continues to produce the same disturbance in the hepato-biliary apparatus, the starting-point of the cholæmia. To combat the cholæmic poisoning, therapeutics furnishes many resources of which the physician may avail himself without prejudice to the patient; these resources have been already mentioned—purgatives, diuretics, acid lemonades. To combat the malarial poisoning, the only sure means is quinine, and this is contra-indicated after the ataxo-adynamic symptoms of cholæmia manifest themselves, because it renders them more grave and more pronounced. It is, then, important to lose no time nor make timorous experiments when it is a question of using the salts of quinine in the bilious fever of the tropics. So long as cholæmia has not developed, so long as only bilious symptoms and fever exist, the practitioner should give quinine in the dose of twelve decigrammes or two grammes per day, during two consecutive days; afterwards he will gradually lessen the dose until he reaches forty-five centigrammes. Under this procedure, either the cholæmic poisoning will be slight—inasmuch as the primary cause producing it had not time to act for many days, and was at once entirely neutralized,—or in case it supervenes with full severity, the system will strive with it alone; in proportion as the blood goes on ridding itself of the noxious principles which altered its crasis, and continues to approximate the normal condition, fresh toxic elements of the same sort as those eliminated will not be carried into the current of circulation by the veins and lymphatics of the liver, since the course of the bile has been now re-established, and the cause that embarrassed this course has been removed.

(*To be continued.*)

OPERATION FOR COMPLETE PERINEAL LACERATION.

BY JOSEPH PRICE, M.D.

It is the general opinion of practitioners that specialists pay little or no attention to diseases of women, outside the abdomen and pelvis; but this I believe to be erroneous, except as it applies to "mushroom specialists." There are many who, essaying to be authorities on major surgical diseases, have no conception whatever of injuries of the perineum and cervix, so far as their intelligent repair is concerned; indeed, there are many enjoying large obstetrical practice who labor under the delusion that they have never ruptured a perineum, and that all their patients have entirely normal perinea—a misconception due to improper teaching, more than to any other cause. When it is considered that many of the prominent teachers do not hesitate to maintain that with this or that manipulation a perineum need never be ruptured—leaving out of sight altogether the fact that no procedure affords absolute security—there need be no surprise that errors of belief are so common and pernicious.

Perineal lacerations, unless they extend through the skin, to or through the sphincter, may elude detection by any but the most thorough digital examination. It is a serious error to start with the idea that a perineal tear does not exist unless the external part to which the name "perineum" is applied is lacerated.

Obstetrical teaching directs that the perineum be supported with the hand or with a towel, so as to prevent a tear; while the truth of the matter is that the most injurious tears often occur before there is any indication for support. It must be remembered that the perineum proper is made up of all the muscles composing the lower pelvic diaphragm, and that this diaphragm is anatomically the adjunct and coefficient of the upper or true diaphragm of the respiratory apparatus; this fact is of importance in estimating the significance of pelvic lacerations; and the simple suggestion will be sufficient to indicate another and often forgotten phase of the logic by which the repair of these lacerations is to be insisted upon. As a primary and fundamental feature for the due appreciation of

every perineal tear, it is to be remembered that it begins on the inside, or, in other words, proceeds from above downward, from within outward; that an important outside tear without a coexisting internal tear is an accident of extreme rarity; and beside, that there may be most serious internal laceration without any dermal manifestations.

Then again, there may be so much overdistention of the tissues that all pelvic support is absent, without any evidence of real laceration. This sort of tear bears the same relation to evident laceration that a subcutaneous tenotomy does to a free open incision of a muscle; the more apparent operation is not more real than the other. So it is in pelvic tears, and overdistention may, just as truly as more apparent injuries, deserve the categorical term of "laceration" and claim surgical repair.

"Complete perineal laceration" is a term usually applied to tears through the sphincter. These tears are regarded as the most important, on account of the discomfort they entail from a cosmetic point of view. Women with the sphincter ani lacerated have entailed upon them a miserable existence, though other complications and calamities of pelvic laceration may be absent. Even though the sphincter be torn through, there may be no sagging of the pelvic contents, no cystocele, no rectocele, no prolapsus uteri. This is explainable if we remember that in a distinctly central tear the lateral attachments of the muscles and fascia are uninjured, while the middle junction of the perineal muscles is simply split, divided, or separated, and consequently the support, while diminished, is sufficient to withstand the pressure force of the pelvic contents; in other words, the resistance of the muscles is diminished, not destroyed.

Complete tears ought to be considered as including all deep fascial and muscle lacerations, either on one or both sides, with a coexisting or non-coexisting sphincter tear as the case may be. All of these deserve careful attention, and should be approached as distinct surgical lesions, to be repaired in the line of their anatomical destruction and not as cosmetic operations whose object is to obtain superficial appearances without regard to perfection and utility. Heaping up of tissue outside the lines of resistance and tension, or mere thickening of mucous membrane and skin, does not make a true perineum; neither does a set of outside sutures, however much they may draw the parts together, afford any anatomical counterpart of a perineum. From this basis all the so-called outside flap-splitting operations for perineal tears are only puckering operations, bringing together parts within the sutures that have never been severed, and in many cases taking them out of their proper relations. The instruments formerly suggested as the wherewithal for perineal repair, of which the Peaslee or Baker Brown needle may be taken as the type, should be relegated to sail-makers and cobblers, for they have no place in the delicate scientific surgery of the parts. Big sutures, heavy ligatures and clumsy instruments have here no more place than in other surgery. The ordinary short strong sewing-needle fills the bill exactly in most cases, though Emmet's strong, fine, short needle is preferable for general use; and silkworm-gut or silver wire is the preferable suture; these, with a needle-holder without cock and shot compressor, and tenaculum, are really the only instruments required. It is here as in other operations: once understood, they are simplified, and the simpler they are the more easy their performance and the more assured their success and utility, so long as their scientific conception is correct.

The Emmet operation as originally suggested, and afterwards modified by its distinguished devisor, is the foundation for all successful operations on the lacerated perineum, either with or without sphincter tear. This, it is to be remembered, is always an inside operation. Even in sphincter tears two or three outside stitches are all that in the majority of cases are necessary. Its so-called modifications are extensions only of the original idea of Emmet, and are only original in the use of a greater denudation, with a consequent increase in the number of stitches.

The ordinary Emmet operation has so frequently been described and discussed that I shall now confine my attention to the method of closing complete tears—that is, those through the sphincter. In this condition, as in tears of lesser extent, the flap-splitting operations

which have claimed superiority in certain quarters are really misleading superficial procedures. They attack tissues, not in the lines of their real rupture, and do not, and cannot, go to the real origin of the tears. They do not afford an end-to-end adaptation of the torn muscle, but substitute for this a lateral apposition simulating end-to-end restoration.

The loss of tissue objected to in the Emmet operation is more than equaled by the lateral apposition. Moreover, it is to be remembered that the sphincter is a distinct anatomical unit, and that any flap-splitting that attempts to repair this together with other laceration is overreaching itself—attempting to repair two or more distinct lesions at one time. When the fascia is injured, in addition to the sphincter tear, the injury is to be remedied by the ordinary Emmet operation. This operation by its denudation brings into relation large triangular bevels on one or both sides, putting into relation the torn ends of the torn muscles. When the sphincter ani is ruptured, it must be remembered that its torn ends are drawn outward and backward until they lie on a line with the posterior line of the rectum; in other words, the muscle is straightened. The depressions on either side of the anus are caused by the torn ends of the muscles retracting the mucous membrane, thus forming the characteristic dimples. The denudation should be made so as to expose the cut ends of the muscle on either side, and continued upward into the bowel as far as the laceration extends between the rectum and vagina, into the recto-vaginal tissue.

Two sets of sutures are ordinarily required. The first is the deep vaginal set, and restores the recto-vaginal septum, bringing the parts into the relation they should assume were there no sphincter tear; while the other sutures are introduced as in an ordinary or fascial tear. The rectal or vaginal sutures are, of course, the first to be introduced,—if catgut is used for the closure of the bowel, their method of introduction is left to the choice of the operator; if silk, silver wire or silkworm-gut is used, they must be introduced so as to be tied, twisted or shotted on the vaginal side. After the tear into the recto-vaginal septum has been closed, attention must be paid to bringing the ends of the sphincter accurately into apposition. For this purpose the needle must be introduced at the edge of the torn muscle, directed upward, then backward to the internal edge of the muscle so as to bring the retracted central portions to a level. This procedure is adopted on both sides, a flat surface of muscular tissue is obtained, and the apposition will be complete.

Failure of this operation is easily discoverable. If a fistula persists, there is generally more or less complete failure of the operation, and the desired effect is not obtained. To insure complete success, extreme care is necessary to restore the bowel, and to treat the sphincter as an integral portion of the same, bringing the sutures down so as to leave no pocket between the bowel proper and that portion into which the sphincter is inserted. The ability to operate successfully upon the torn sphincter indicates a proficiency and delicacy in plastic surgery which every surgeon undertaking to repair lacerated perinea should possess. Ability to perform the operation will often save the general practitioner of obstetrics from unkindly criticism, and his patients as well as those of his professional neighbors from much suffering and inconvenience.

The tears of perinea are often unavoidable, but their restoration is always possible, and their neglect is criminal.

Philadelphia, Pa.

LEUCORRHŒA: ITS CAUSES, VARIETIES, AND TREATMENT.*

BY THOMAS MORE MADDEN, M.D., F.R.C.S. ED.

The subject of the present communication, trite as it may seem, is well deserving of fuller consideration than is generally accorded to it by modern gynæcological authorities. In a large proportion of instances the first symptom that directs the attention of patients to the most common forms of diseases peculiar to women is leucorrhœa, or, in other words, some abnormal mucoid exudation from the genital canal. Such discharges, although obviously symptomatic, are frequently so prominent a feature of these cases, or are so

* Read before the Section of Obstetrics of the Royal Academy of Medicine in Ireland.

obscure in their causation, so far-reaching in their consequences, or so intractable in their management, as to occasion no small part of the diagnostic and therapeutic difficulties encountered in this special branch of practice.

It may, therefore, be not altogether useless to review briefly, from the standpoint of a somewhat extended clinical experience, our knowledge of the general pathology of leucorrhœa, the circumstances from which it originates, the results it occasionally produces, and the methods available for its treatment.

Under the term "leucorrhœa" I shall here include all those mucoid exudations containing elements foreign to healthy mucus that may proceed from the lining membrane of any portion of the female genital tract. These discharges are commonly classified in accordance with their special cause or from their primary location. The latter arrangement—although open to the objection that this complaint seldom remains permanently confined to its starting-point, and also that its characteristics, consequences and treatment are influenced not alone by its situation but by special exciting causes and by constitutional conditions—is nevertheless probably as good as any other that can be suggested, and hence will be followed in the subsequent observations, in the course of which the vulvar, vaginal, uterine, and tubal forms of leucorrhœa must be separately discussed.

I may premise that mere blennorrhœa, or simple hypersecretion of the mucus—containing no morphological elements besides detached epithelial cells and mucous corpuscles—normally secreted by the genital lining membrane, does not come within the purview of my remarks on leucorrhœa, although it is so included by other writers. Irrespectively of any pathological conditions, the natural secretion of mucous may physiologically be increased by local hyperæmia consequent on ovulation or pregnancy; moreover, its normal amount bears a constant relation to other circumstances, being greatest during the epochs of reproductive activity and in married life, and least before the period of puberty and again in advanced age when the vaginal rugæ become comparatively bloodless or obliterated, and when, also, the uterus and its adnexa generally undergo a more or less marked process of senile atrophy.

In reference to leucorrhœal discharges from the labia, nymphæ, and adjoining parts within the vulvar area or in immediate vicinity, it may be observed that not only are these mucous surfaces peculiarly exposed to the external or catarrhal, infective, and traumatic causes of local inflammation resulting in exudations, but also that the contiguous glandular structures present a fertile field for their development and extension. For instance, the vulvo-vaginal or Bartholinian glands in the deep fascia on either side of the vaginal orifice are, together with their afferent ducts opening at the side of the nymphæ, liable to inflammation, often resulting in abscess or in cystic disease, one of the first symptoms of which is an excessive and vitiated mucoid exudation.

The most common causes of vulvar leucorrhœa are, with one exception, especially exemplified in pædiatric practice. Thus, in the Children's Hospital, Dublin, with which I have been connected for the past twenty-three years, I have had occasion, as I pointed out in some lectures published in 1886, and again in my recent "Handbook of Diseases of Women," to notice the great frequency and importance of leucorrhœa in children of all ages from infancy up to puberty. Moreover, such discharges may possibly become of medico-legal as well as therapeutic interest, as I have seen in several instances where I have been called on to give medical evidence in reference to charges arising from this occurrence.

As, however, the practical importance of vulvar leucorrhœa in childhood does not appear to be sufficiently recognized, I would commend the following remarks of Keating to the careful consideration of those who have to deal with such cases:

The catarrhs of infancy, which may result from cold, pent-up secretions, want of cleanliness, etc., act on the mucous lining of the uterus, as they do on that of the nasal passage, producing congestion, infiltration, and finally stenosis of the passages. The effect this has upon the uterus is to congest it, to obstruct its canal, and to increase its weight, and undoubtedly not a few of the uterine flexions and versions, with their many symptoms, including dysmenorrhœa, that attend

puberty or follow it, owe their origin to this cause. . . . Every mother should be taught that no child should have protracted leucorrhœa—that it is a pathological condition and needs the immediate attention of the physician.

Nor are the effects of neglected vulvar leucorrhœa limited to those above mentioned, for, as Currier has pointed out, although either vulvitis or vaginitis may exist alone, more frequently the infectious disease which begins with the vulva does not end there, but may extend to the uterus, the Fallopian tubes, the ovaries, and the peritoneum; and therefore, as he adds, it seems extremely probable that many of the deformed and undeveloped uteri, with which are associated so much dysmenorrhœa and anguish, sterility and domestic unhappiness, are the legitimate consequences of vulvo-vaginitis in early life.

Of all the causes of vulvar leucorrhœa, one of the most important in childhood is a constitutional strumous taint, the local influence of which is often as obvious in this complaint as in the chronic glandular affections of children of that diathesis. Next in frequency in the causation of such discharges at all ages, but more especially in the ill-cared-for children of the poor who have come before me in the extern departments of the hospitals to which I have been attached, is the too common neglect of that attention to the cleanliness of the genitalia which is essential to their sanitary integrity. In other instances, vulvar leucorrhœa is consequent on local irritation traceable to ascarides. Still more frequently, in young and old alike, it presents a catarrhal form following exposure to cold or wet; or it may result from direct injury to the parts, as well as from any other cause of vulvar inflammation.

Reserving the "specific" forms of leucorrhœa for subsequent consideration, the ordinary symptoms of pudendal inflammation leading to mucoid discharges from the vulva are, briefly: A sense of fullness or discomfort in the external genitalia, together with a hyperæmic tumefaction of the vulvar mucous membrane, followed by the exudation of a discharge which from the first is generally much more viscid and tenacious than in the vaginal forms of the complaint. In many instances the pudendal orifice is so glued together by this discharge as to cause considerable pain and difficulty in micturition.

A primary point to be attended to throughout the treatment of vulvar leucorrhœa is to secure, as far as possible, the asepsis of the affected surface by the frequent use of warm antiseptic lotions—such as boric acid, corbolic acid, thymol, etc., or corrosive sublimate, 1 in 2000—so as to sterilize and to cleanse the parts as thoroughly as practicable from the abnormal exudations, which, when allowed to accumulate there, are liable to become decomposed and thus not only increase the local irritation but also furnish a medium for the reception and development of pathogenic micro-organisms by which the entire genital tract may be speedily infected.

Without entering into detail on so wide a question as the causes, immediate or predisposing, of the hyperæmic and other conditions of the vulva that may give rise to leucorrhœal discharges therefrom, and the recognition and treatment of which are essential to their cure, it will, perhaps, suffice to say that, in ordinary cases of catarrhal and simple inflammatory mucoid discharges from the lower segment of the genital tract, these exudations may, generally speaking, be arrested either by the application to the vulvar mucous surface, by the insufflator, of non-irritating, dry, antiseptic, astringent agents—such as boric acid and ferric alum—or by the topical employment of borated glycerin, and glycerite of carbolic acid; or, and oftentimes no less effectually, by some of the older-fashioned ordinary local astringents, such as a strong (*i. e.*, twenty-five-per-cent.) solution of nitrate of silver. In the interval between these applications the parts should be kept well separated by antiseptic gauze, saturated with dilute lead water, or distilled extract witch hazel, until the discharge has completely subsided. During this local treatment the patient, if we wish to effect a speedy and permanent cure of acute vulvar leucorrhœa, should be restricted to bed, and, after free purgation, be put on a light, nutritious dietary. Even in the chronic forms of this complaint these measures are frequently no less advisable, in conjunction with the addition of any tonic or other remedy that may be specially indicated by the existence of the

strumous, chlorotic, anæmic, or other constitutional cachexia, one or other of which is so generally associated with chronic vulvar leucorrhœal discharges, and by which, in not a few instances, they may be produced or kept up.

Whilst, as already observed, leucorrhœa, if neglected, sooner or later travels far beyond its primary seat, nevertheless in many instances this process of invasion is indefinitely protracted, and for a time at least the complaint remains localized and evinces distinctive features consequent on the structural and physiological characteristics of its starting-point. Thus, for instance, leucorrhœal discharges from the mucous membrane of the lower portions of the vagina are generally less viscid than those proceeding either from the vulva or from the upper part of the vagina, and especially less so than those from the cervix. From the latter, vaginal mucoid exudations further differ, not only in their acid reaction, but also in that peculiar opalescent yellowish-white, creamy color to which the disease owes its popular name—"the whites." This distinctive appearance is obviously due as much to the larger proportion of albuminous constituents, both in solution and in suspended flocculi of coagulated albumen, which such vaginal secretions contain, as to the presence therein (as was originally demonstrated by the late Tyler Smith, to whose exhaustive and too seldom acknowledged researches on this subject subsequent writers owe much) of innumerable scaly epithelial cells and fatty débris, with which, as the disease progresses, genuine pus-corpuscles and blood-disks may eventually be interspersed.

On the other hand, those yet more opaque, semi-solid, curdy exudations, frequently observable in the upper portion of the vagina, generally result from the admixture there of its acid secretions with the alkaline cervical discharges, and the consequent firm coagulation and ultimate local adhesion of their albuminous constituents. In this way the vaginal walls may become so densely encrusted by pseudo-membranous-looking exudations as to produce those appearances which some authorities have, as I think erroneously, ascribed to croupous or diphtheritic vaginal disease.

The causes of this condition include all the forms of local irritation to which the genital canal is liable, such as the following: Catarrhal and strumous inflammation of the vagina; follicular vaginitis; specific, and more especially gonorrhœal, infection; neglect of cleanliness; irritation from worms; vaginal tumors; congestion resulting from uterine displacements; mechanical injuries; over-stimulation of the parts—as frequently evinced in newly married patients. Vaginal leucorrhœa may also arise from the extension of uterine, tubal, ovarian, or pelvic disease; from the genital hyperæmia attending the latter months of pregnancy; from the topical congestion ushering in the catamenial epochs or consequent on the menopause. Moreover, independently of any local lesion, leucorrhœal discharges may be vicarious of menstruation; may be consequent on arrested lactation, or due to metastasis of remote disorders; and lastly, they may be the result of constitutional debility, however occasioned, giving rise to impaired tonicity of the vaginal mucous surface, and consequent hypersecretion therefrom.

Although the causes of leucorrhœa are so many-sided, as is indicated in the foregoing list—which might be extended,—it will suffice here to refer chiefly to the more important of the inflammatory or sub-inflammatory conditions that commonly give rise to that discharge. Amongst these are: Catarrhal and simple local inflammations; infective or gonorrhœal; strumous; and follicular vulvitis. In not a few instances, however, it will be found practically impossible to distinguish between the three former—all of which, if unchecked, may eventuate in the last-named or follicular type of the disease.

Vaginal leucorrhœa, from any of these inflammatory lesions, is generally preceded by a sense of heat and irritation in the affected mucous surface, which at the same time is tumefied and dry, until this hyperæmia becomes relieved by more or less profuse leucorrhœal exudations from the inflamed membrane. On local examination the calibre of the canal will now be found diminished owing to the congestive tumefaction of its walls, and the vaginal mucous membrane highly vascular in aspect when freed from the tenacious and possibly muco-purulent discharge by which it is coated, and by which

are overlaid the mucous follicles (ultimately eroded, hypertrophied, and dotted over with clusters of proliferating mucous papillæ). This condition, which may endure for an indefinitely protracted period, is very generally present in cases of long-standing vaginal leucorrhœa, and is then commonly connected, whether as cause or effect, with some form or other of chronic uterine, peri-uterine, tubal, or ovarian complaint.

The differentiation of gonorrhœal from non specific inflammatory exudations of the vaginal mucous membrane is a matter of great importance, and often of much difficulty. In both instances the extending local inflammation may give rise to discharges from the mucosa of the urethra and bladder as well as from the vulvo-vaginal surface, which can only be distinguished by the presence or otherwise of the gonococci of Neisser. Frequently, however, this test is not practically available, nor is it always reliable, as that gonococcus is not invariably discoverable with certainty, at least by immediate microscopic examination, in gonorrhœal discharges, whilst, as Parrish and Baldy have pointed out, occasionally other micro-organisms, apparently morphologically identical with gonococci, are found, which can be distinguished only by an expert; moreover, as they add, "the disciples of Neisser have by no means satisfactorily proven that the gonococcus is the cause of gonorrhœa." Under these circumstances diagnosis must, as a rule, be grounded on the probabilities and history rather than on the immediate pathological evidences, or on the symptoms of the complaint. It should hardly be necessary, therefore, in this connection, to remark that in cases such as these, in which a patient's reputation or domestic happiness may be involved in the question now referred to, opinions cannot be too carefully considered or too cautiously expressed.

Vaginal leucorrhœa, whatever its origin, as before said, invariably tends to extension to the contiguous mucosa; and hence urethritis, vulvitis, and cervicitis—often resulting in dysmenorrhœa and sterility—are daily observed in cases of this kind. Moreover, the specifically infective forms of vaginal exudation, if neglected, frequently lead either to endo-uterine disease or to graver tubal complications, such as salpingitis and pyosalpinx, or may eventuate in pelvic cellulitis and other inflammatory lesions of the pelvic connective and serous tissues.

In whichever of the above described forms leucorrhœal discharges from the vaginal walls present themselves, the principles on which they should be treated are essentially similar, and in none of them can the *minima diligentia medicina* be safely acted on. In most instances the obvious therapeutic indication is the abatement of that local hyperæmia on which the exudation is consequent; and this can only be accomplished by the removal of its immediate exciting cause, and by the cleansing away as far as possible, and if necessary the sterilization, of the discharge. With these objects, should the origin of the complaint be gonorrhœal or other specific infection, effective germicidal agents such as bichloride of mercury (1 to 2000) should be freely applied; whilst in the majority of other cases of catarrhal and inflammatory causation, all that need be locally employed in the initial stage is hot water abundantly and frequently, followed by weak lead lotion, dilute solution of fluid extract of *Hydrastis canadensis*, or any other soothing vaginal irrigation.

As soon, however, as the acute inflammatory condition of the vaginal mucous membrane commonly connected with the commencement of leucorrhœa has subsided, or where it does not exist, and when the exudation has become well established, the employment of some local and astringent application may prove remarkably effectual, as I found in several instances, in arresting vaginal discharges and removing the chronic inflammatory conditions with which they may be connected. In the way of the so-called "dry treatment," with the aid of the vaginal insufflator I generally employ a powder consisting of equal parts of boric acid and alum, or iron-alum, introduced into the vagina daily until the discharge becomes checked.

In a few otherwise intractable cases of chronic vaginal leucorrhœa, I have found special benefit to accrue from the local use of a mixture of one part of glycerite of carbolic acid with four of glycerite of tannin, applied by means of a saturated tampon introduced through the speculum, on the removal of which the tampon should be retained

or some time so as to bring the contracting aginal walls in contact with the expressed stringent. In one instance my assistant, by ccident, saturated the cotton wool with pure arbolic acid, nor was this discovered until he vaginal surface was observed to become hitened and shriveled up. The vaginal urface was then washed out with an alkaline jection, and the patient remained uncon- cious of the mistake that had occurred. ome days subsequently a complete cast of he vaginal mucous membrane was thrown ff, the result being a permanent cure of the re-existing vaginitis and consequent leucor- hœa. This method of treatment, I need ardly say, is not here mentioned as one to e generally adopted in such instances; few, any, of which will require any other local emedies than those above recommended.

The physiological hyperæmia of the genital act consequent on gestation, commonly ives rise to hypersecretion of vaginal mucus. his, being a symptom rather than a disease f pregnancy, generally calls for nothing ore than proper attention to local cleanli- ess by the free use of warm water and coal- ar or carbolic soap, or possibly the occasional mployment of vaginal insufflations with boric cid. In some instances, however, the exuda- on is of thicker consistence, creamy or yel- owish in color, and distinctly muco-purulent, iving rise to intense pruritus of the puden- um, especially in the latter months of preg- ancy. This discharge may be confounded ith that resulting from gonorrhœal infec- on, from which it must be differentiated as efore described. Moreover, as Leishman bserved, when simply due to pregnancy, ven the most profuse discharges rapidly isappear after delivery, and seldom attract ny notice after the lochia has ceased to ow. Cases, however, occasionally occur in hich such a discharge, originally appearing uring pregnancy, lasts during the convales- ence after labor, and ends in an obstinate nd troublesome vaginal leucorrhœa. The reatment of this affection must necessarily e confined within certain limits, so that ometimes palliation is the most we can hope or. Cauterants or strong injections cannot e employed, lest they should induce prema- ure labor, and even the simplest injections ust, if used, be employed with the greatest possible caution, as it is well known that re- peated injections, even of tepid water, will often suffice to induce uterine contractions.

In cases of this kind I have myself almost always found constitutional treatment, and more especially the exhibition of iron and quinine or other tonics, no less necessary and serviceable than that mere attention to vulvo- vaginal cleanliness which, together with as- tringent lotions and suppositories, is more commonly relied on.

Leucorrhœal discharges in the last months of pregnancy are especially prone to occasion great irritation or even erosion of the ex- ternal genitalia; and for the relief of such cases of pruritus, I recommend a fair trial of the ordinary local sedatives.

Apart from any of the before-mentioned direct local sources of local irritation or hyperæmia, the secretions of the vaginal and uterine mucous surfaces may be abnormally augmented and altered by various constitu- tional causes, as is observed in patients of well marked strumous diathesis, in whom abundant glairy exudations from the genital mucosa are hardly less common than the similar looking catarrhal discharges from the naso-pharyngeal surfaces and glands of scrofulous subjects. In like manner the im- portance of a constitutional factor in leucor- rhœal cases is also apparent in females suf- fering from chlorosis, anæmia, and other forms of debility, and in whom blennor- rhagic vaginal hypersecretions that cannot be traced to any local lesion and evidently consequent on general impairment of vas- cular tonicity, are so often noticed. In other instances, again, the constitutional cause of leucorrhœa is proven by its occurrence as a direct consequence of arrested lactation, or as a metastasis of gouty or rheumatic dis- orders. Still more obvious in this connection is the so-called amenorrhœal form of leucor- rhœa, in which we find the suppression of menstruation attended by more or less non- hæmorrhagic discharges from the vagina and endometrium.

Of the many factors concerned in the æti- ology of leucorrhœa, none are of greater im- portance or more frequent occurrence than the various lesions, catarrhal, inflammatory, traumatic, hyperplastic, infective, and malig- nant, by any of which, as well as by constitu-

tional conditions, the glandular structures or mucous surfaces of the cervix uteri may be so implicated as to give rise to morbid exudations therefrom. It being impossible, however, within present limits to refer in detail to all these different causes of cervical leucorrhœa, I must confine myself to some observations on the general characteristics and treatment of the non-specific discharges most commonly thus occasioned.

These exudations consist primarily of a hypersecretion of the bland crystalline mucus which is normally evolved from the muciparous follicles and epithelial surfaces of the rugous portion of the cervical canal. This, under pathological conditions, becomes gradually altered in character as well as in quantity, and eventuates in that viscid glutinous or bird-lime-like discharge, frequently acrid in alkalinity, which may be seen coating the gaping lips of a lacerated cervix in instances of chronic cicatricial ectropium, or extruding from the os uteri in cases of endocervicitis. If traced further up, that exudation will then be found, as was clearly described by Tyler Smith, adhering closely to the cervical crypts and rugæ, so as to fill the canal, and consisting chiefly of mucous corpuscles, oil globules, dentated epithelial cells, with which are also not infrequently found blood-disks and pus-corpuscles, enveloped in a thick transparent plasma, closely resembling raw white of egg, remarkable for its tenacity, alkaline in its reaction, and thus contrasting distinctly with the thin acid secretions of the vaginal mucous membrane.

These exudations may originate either from the sinous fossæ lined with cylindrical epithelium, between the plicæ palmatæ on the anterior and posterior walls of the cervix, which may be regarded as the secretory organs of the normal viscid crystalline mucus of the cervical canal, or from the so-called ovula Nabothi in the same region. The latter vesicles, composed of connective tissue and cylindrical epithelium, may, perhaps, like the Graafian follicles, be regarded as closed glandular vesicles, bursting periodically, though possibly, as Kollicker observed, they "are nothing more than dilated and closed mucous follicles, and in part also pathological new formations." Be this as it may, however, the muciparous follicles, closed and open, which are normally the sources of the healthy cervical mucus, undergo a periodical enlargement and increase of secretory activity in connection with ovulation, and more especially manifest during pregnancy, when they secrete that mucous plug by which the cervical canal is then closed.

Under normal conditions the crystalline cervical mucus acts not merely as the natural lubricant of the canal, but between catamenia as a block by which the entrance to the uterine cavity is guarded against the admission of pathogenic germs, and also as a suitable medium for the passage of spermatozoa into the uterus, as well as a seal to the orifice of the latter during pregnancy. All these functions are impaired or destroyed when that secretion becomes abnormal or leucorrhœal—a condition which even in its most simple form must not only constitute a more or less serious constitutional drain, occasioning impairment of the patient's general condition, but also prove a likely focus of infective disease from the possibility of septic changes in the vitiated and adherent discharges. Moreover, these exudations, especially when their morphological elements, their viscidity and alkalinity are most distinctly abnormal, are of direct pathological moment as frequent sources of irritation and erosion of the cervix, and above all are of special interest in reference to the causation of sterility. The latter point is one of great practical and often neglected importance in connection with the treatment of barrenness. In such cases it very frequently happens that operative measures to overcome supposed stenosis might be dispensed with if the circumstance first clearly pointed out by J. Marion Sims—that probably the most common cause of sterility is an abnormal condition of the cervical secretions—was sufficiently recognized. Sterility may be produced either mechanically (by the calibre of the canal being so completely filled by the unduly viscid mucus as to interpose an insuperable barrier to conception) or chemically (by the secretion being so hyper-alkaline and acrid as to occasion the immediate destruction of the spermatozoa). This fact has been abundantly confirmed by my own clinical experience of numerous cases in which the cure of sterility was effected by

the thorough curetting of the cervical canal, so as to destroy the diseased secretory surface, as well as to clear the passage from the mechanical obstacles presented by its morbid exudations.

In reference to the general pathology and therapeutics of the conditions leading to cervical leucorrhœa, I may observe that, in the old "Dublin Obstetrical Transactions," upwards of twenty years ago, I pointed out their common connection with constitutional, and more especially with strumous, diseases, and urged the importance of conjoining constitutional treatment with whatever local measures might be necessary in such cases. In a more recent work* I again endeavored to enforce this still neglected truth, in which, however, I have since discovered that I had been anticipated by the late Tyler Smith, to some of whose views on the ætiology of leucorrhœa I have already referred. As Tyler Smith is one of the first and ablest exponents of the importance of constitutional treatment in leucorrhœal cases, and as his papers in the *Lancet* on leucorrhœa, though republished in his work on that subject five years subsequently, are probably not familiar to many at the present day, his remarks on this point may be here very briefly summarized.

The glandular structure of the parts, he says, whence the discharge arises, points to the influence of constitutional causes, and exemplifies why this affection should be so common in women of strumous habit and leuco-phlegmatic temperament. Moreover, it vindicates the importance of constitutional treatment, and directs attention to the more rational employment of topical remedies, it being evident that, although leucorrhœa of the cervical canal is sometimes cured by the use of caustics to the os uteri, in these cases they act as counter-irritants to the glandular structure. The indications of treatment, based on a knowledge of the minute anatomy of the os and cervix uteri, and the study of their pathology in leucorrhœa, show the importance of combining constitutional medicines and regimen with local applications, which, to be of any use in cervical leucorrhœa, should be applied, not to the vagina, nor to the os uteri, but to the canal of the cervix.

The latter object may, I think, be most readily and effectively carried out by the employment of the curette, and for this purpose I have found Duke's dull-wire cervical curette most useful in the thorough removal of that viscid, tenacious discharge by which the canal is blocked in cases of cervical leucorrhœa, without any risk of too deep a denudation of the walls of the passage. Before employing this or any other curette, however, I generally find it advisable to dilate the canal freely by the two-bladed dilator which I have shown on previous occasions; and, in my practice, immediately after curettage, the denuded endocervical surface is brushed over with iodized phenol, the patency of the passage being subsequently maintained by the use of bougies.

Such local measures should, generally speaking, as before observed, be conjoined with constitutional treatment, and more especially with those remedies specially indicated by the strumous diathesis so frequently noticeable in patients suffering from chronic leucorrhœal discharges. Without again enlarging on this point, it may be enough here to say that in the way of general treatment, in the majority of these cases, the physician must rely chiefly on those ferruginous tonics — such as iodide, phosphite, or hypophosphite of iron—which, with mineral acids, quinine, cod-liver oil, and malt preparations, are — in conjunction with suitable hygienic and dietetic measures — his ordinary resources in all strumous disorders. The only drug which would appear to me to have anything like a special or even a commonly remedial effect in ordinary chronic leucorrhœal cases is arsenic and its combinations, such as Donovan's solution, from which, when administered in small and long-continued doses, I have unquestionably experienced much benefit in the treatment of many cases of this kind.

Dublin, Ireland.

*"Clinical Gynæcology," page 148. J. B. Lippincott Co., Philadelphia.

SHAMEFUL.

That a medical journal, in order to secure subscribers, will offer as prizes half a dozen patent and proprietary medicines.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., JUNE 10th, 1895.

Editorial.

WHAT IS THE MEANING?

We quote the following from a Washington paper of recent date:

The affairs of the Columbia Chemical Company were made the subject yesterday of lively litigation. William A. Hammond, who has been identified with the Company one way or another since its formation, brought a petition for injunction against the officers to prevent the use of his name on certain advertisements for the sale of animal extracts, on the charge that these advertisements, run in several papers, were becoming offensive. . . . The Company filed a similar petition for an injunction against Hammond and the Hammond Sanitarium to prevent the manufacture by him of the animal extracts.

Hammond states in his petition that certain preparations or medicines from animal extracts were first discovered by him and announced in New York through a lecture and subsequently in the medical journals. . . . He wants the court to prohibit the use of his name except in such manner as he may approve.

The petition filed by the Columbia Chemical Company states that Hammond was given 24,995 of the 50,000 shares of stock in the Company for his right and interest in the discovery, and that he afterwards sold this stock for a large sum. They say a contract was executed last September by which Hammond was to receive a royalty of ten cents for every two drachms of the extract manufactured, and twelve and one-half cents after January next; they say he has also given them the sole benefit of any new discoveries in this line which he might make. It is charged, however, that Hammond, in company with Mahlon Hutchinson, is now preparing to manufacture the same extracts for the Hammond Sanitarium Company and to put them on the market.

In view of the fact that the name of "the Great Retired" has constantly appeared in mammoth letters in the advertising columns of the daily press through North America for many months, it would seem eminently proper that this modest gentleman should at last awaken to the fact of having secured undue notoriety. Fully appreciating his retiring disposition, we felt inclined to extend to him our sympathy under this persecution and to express the hope he would obtain due redress in the courts. But then there was a query: Did all this have "a tail" to it? It seems strange that this individual, who has been somewhat famous for not allowing his right hand to know what the left undertook, should, so to speak, be pitting the dexter against its sinister fellow. Again, the exhibition of modesty which is so characteristic appears to be a little late in coming, and it is very natural to associate therewith a failure in realization of "filthy lucre" as anticipated.

But a subsequent issue of the same newspaper appears somewhat explanatory. It declares that at a hearing of this suit the attorney of the Only Great "maintained that advertisements which were inserted in many newspapers in different parts of the country were offensive and indecent and tended to brand his client as a vender of quack medicines" (a stigma which has been pretty thoroughly endorsed from Hudson's Bay to the Gulf, and from the Atlantic to the Pacific); while the Company's counsel informs the public that Hammond, realizing at last that the animal-extract business is not the howling success anticipated, endeavored to force the Company to purchase his stock at his own figure.

There is an old "saw" to the effect that when certain classes of individuals fall out, more reputable members of the community get their dues. How far this will prove true in the present case remains to be shown, but the Columbia Chemical Company in their answer and arguments declare that Hammond and the vice-president of the Company, W. P. Springer, quarreled, when the former declared he would in future disapprove all advertisements which should bear his name; and finally that said Hammond disposed of his stock, for which he asked the Columbia Chemical Company $25,000, for one fifth this sum. Other charges of unfairness were made against the plaintiff touching

his management of the stock and the manufacture of the so-called remedies.

The suit of the Chemical Company against the Great Retired and his Sanitarium Company was set down for a later date.

MORBUS BRIGHTII.

It is possible for the enlightened practitioner not only to check the milder forms of renal disease, but even to control and mitigate the symptoms that arise from more severe maladies of the same class; it is, however, a notorious fact that, in spite of the boasted progress of the last quarter-century, little of real value has accrued to renal therapeutics — while new remedies galore have been heralded, these with few exceptions have proved inferior to those of greater age, and the drawback to advance in this particular direction may be laid at the door of rapid exploitation of medicaments without adequate study and investigation, due to the multiplying of synthetics and other coal-tar derivatives.

The chief demand in kidney trouble is, an absolutely correct diagnosis—everything hinges upon this. Next, to give rest to the diseased organ by reducing its labors to a minimum, which may be done by promoting the vicarious action of the other emunctories of the economy.

The three great channels whereby it is possible to remove excrementitious material that normally falls to the lot of the renal organs to eliminate, are: The bowels; the skin; and, the lungs. By stimulating the action of these, it is possible not only to remove for a time a portion of the labor from the overtaxed kidney, but in more advanced cases to materially disburden the patient of dropsical accumulation, thereby securing appreciable relief and comfort; and thus even may be mitigated the more distressing symptoms ordinarily included under the title of "uræmic intoxication"—symptoms that are, properly speaking, the direct results of retention in the circulation of excrementitious products, organic as well as inorganic, which it is the business of the kidney to excrete.

The skin and respiratory organs are much more powerful auxiliaries in the elimination of the urinary product than is, perhaps, generally supposed. Cutaneous transpiration removes not only aqueous fluid but many organic and inorganic salts; even in health the perspiration contains urea, uric acid, phosphates, and chlorides, while in diseased conditions many abnormal compounds, even to insoluble oxalate of lime, are excreted by this means. Pulmonary exhalation, judiciously stimulated, also may be made of equal service, since in the expired air of the healthy may be detected urea, uric acid, and urates of soda and ammonia. The great dependence, however, must be placed upon vicarious action of the intestines, which may be induced by mild or drastic cathartics, according to the constitution and needs of the individual sufferer. Where there is much anasarca, Elaterium is perhaps one of the best of purgatives, though the mistake is often made of administering it alone, when it is particularly apt to bring on an exhausting diarrhœa, especially if the manifestations of uræmia are already prominent.—It may be here remarked that the untoward action of elaterium may usually be controlled by combining with minute doses of belladonna or fuller ones of hyoscyamus.

While warm, vapor or hot-air baths may sufficiently stimulate vicarious action of the skin, it will sometimes be found advantageous, if not absolutely necessary, to further encourage diaphoresis by the internal administration of appropriate sudorifics; the relative values of vapor and hot-air baths are about equal in increasing cutaneous, and also pulmonary, elimination of urinary products, though this is perhaps best observed under the latter.—And here it may be well to observe that the too often manifested tendency of the practitioner to endeavor to diminish the urinous odor of the breath and perspiration, in cases of advanced kidney disease, is *greatly to be reprehended;* such should at all times be *promoted*, for it is essential to assist Nature in every laudable effort to rid the circulation of deleterious agents that are gradually but surely extinguishing the life of the sufferer.

Though antiphlogistics are no longer fashionable, and few of the younger practitioners understand their proper administration and management, they are certainly of more direct service in all forms of inflammatory

kidney disease than any other one class of remedies. Great benefit may be oftentimes derived from the local abstraction of blood by means of leeches or cups; even general venesection may at times be of direct value. But just as in many cases of inflamed lung the general condition of the patient prevents active measures, so also will be encountered cases of kidney disease in which like measures may be detrimental, when it may be possible, for a time at least, to divert the course of the circulation by the application to the loins of dry cupping glasses, counter-irritation, or hot, cold or rapidly evaporating lotions. Calomel, too, which is frequently ranked among the antiphlogistics, is one of the few remedies which, judiciously applied, will afford a maximum of relief; it should, however, be employed in large doses, and its action is much more pleasant if combined with some antispasmodic, such, for instance, as camphor monobromide. As high as thirty, forty, or even more grains have been administered at a single dose with most excellent results, and notably such high dosage is followed by none of the depressing effects that are a constant concomitant of doses of twenty grains and under—the effect of these large doses upon the renal organs, far from being "heroic," is most magically soothing.

Regarding the employment of diuretics: It should never be forgotten that in the first stage of all inflammatory or congestive attacks occurring in the course of chronic renal affections, diuretics are totally inadmissible; second, when such are indicated, great care must always be observed in selection, since the one remedy in this class which will prove beneficial in a particular form and at a particular stage of kidney disease, will often be productive of actual harm when administered in another form or in another stage of the same attack; thus, when the albuminuria is the result of active congestion, a combination of bitartrate of potash and an infusion of digitalis proves eminently satisfactory, whereas in the absence of active congestion, and more especially when the vital powers of the patient are low, such will be of little efficacy, the demand being for a diuretic of more stimulating character. The reason why diuretics often are a positive harm in acute kidney affections will be readily understood when is recalled the fact that, in the main, they have a tendency to increase rather than diminish the flow of blood to the already engorged organ.

In this connection may likewise be mentioned the fact that digitalis, tincture or fluid extract, frequently fails to promote diuresis, while the infusion is almost invariably diuretic; consequently it would appear that an excess of fluid is very essential to activity. Normal liquid digitalis, abundantly diluted with warm or hot water at the moment of administration, usually offers all the advantages that accrue to the infusion or decoction, and likewise presents the special advantage of uniformity and certainty of dosage. Best results, too, are to be obtained through such commonplace remedies as aconite in small and oft-repeated doses for its soothing effect; digitalis; caffeine; cannabis Indica; muriate tincture of iron; with such occasional resort to diaphoretics and cathartics as the individual case may warrant.

THAT HAY-FEVER CURE.

The old "chestnut," Fuber's so-called "cure for hay fever," that was so thoroughly exploited two years ago in both the lay and the medical press, is again going the rounds. No less than seven medical exchanges, received in one day, give space thereto, apparently ignorant of the fact that each and every one published the same in either 1893 or 1894; and now it is credited to *The Medical Reporter*, Calcutta, a journal that exists only in vivid imaginations. It is the old story of "rubbing the ears until they are hot," thereby freeing the nasal mucous membrane from congestion. It is hardly necessary to add that the whole thing is—simply *rubbish!*

EDITORIAL NOTES.

Quackery Abroad.—

It has been the custom to regard the United States as the great dumping-ground for quacks. It is not to be denied there is an immense amount of inferior medical talent in this country, and it is somewhat notorious a large portion of such in the States border-

ng upon Canada is derived from the latter, being made up of individuals who were unable to exhibit the necessary educational qualification for study at home. The Empire of Germany has been repeatedly held up to us as a region where quackery was an impossibility, yet the returns in the Kingdom of Bavaria show that in 1893 there were 1,152 charlatans practicing, against 1,184 in 1892; of these, 1,097 were Bavarians, 32 Germans, 19 Austrians, 2 Americans, 1 Italian, and 1 Swiss—a fairly polyglot assembly.

Tapping the Heart.—

In the *Edinburgh Medical Journal*, Doctor Alan T. Sloan reports a case in which, through accident, he pushed an aspirator needle into the right ventricle of the heart. The patient not only recovered, but was completely relieved of a long-standing rheumatism.

There have been other cases of accidental puncture when the intended operation was really paracentesis of the pericardium—in 1872 Rogér reports entering the right ventricle of a child suffering from pericardic effusion, and drawing off six ounces of blood; the patient, as in Doctor Sloan's case, recovered from the operation.

Leprosy in India.—

The Government of India has just made public its opinion regarding the recommendation of the Leprosy Commission. It considers the extent to which the malady is propagated by contagion to be small, and therefore cannot approve of compulsory segregation, either absolute or partial, except among leper vagrants. The Government expresses its conviction that the alarm concerning the increase of leprosy in India is groundless; the statistics show there are less than 127,000 lepers in the entire Indian peninsula.

Teratologia.—

Such is the title of a quarterly journal recently instituted by Doctor J. W. Ballantyne, of Edinburgh, Scotland, and published by Williams & Norgate, 20 South Frederick street, same city. As its name indicates, it deals with congenital maladies and antenatal pathology—manifestly a large field. Not the least of its advantages is the complete review, given in each number, of current literature bearing upon teratological topics

Renal Calculus.—

Before a recent session of the Liverpool Medical Society Mr. Larkin gave the notes of a case of renal calculus in a woman, the symptoms closely resembling those of anal fissure. There were no symptoms referable to the kidneys, except a trace of pus in the urine and, as discovered by palpation under chloroform, slight enlargement of the right kidney. She was completely relieved by removal of the calculus.

Penny Wise, Pound Foolish.—

Certain of the insurance companies of New York have reduced the medical examiner's fee from $5 to $3; some even threaten to cut to a lower figure. The result is that such companies are losing a corps of experienced examiners, who are being replaced by cheap medical talent. Manifestly this will react upon the companies.

Very Bad Indeed.—

The *Ohio Medical Journal* declares that "the facts respecting the water supply of Cincinnati are too loathsome to print in a magazine which circulates outside of that city."

What excellent stomachs the citizens of Porkopolis must possess! But they have the option of beer.

Homœopathic Acumen.—

The most successful, financially and curatively, among the esteemed "regular" brethren, are *those who give homœopathic medicines on homœopathic principles* [Italics ours.—Ed. Age.].—*Homœopathic Recorder*.

Great Hevings!—

"Health came like an avalanche in the Mountains of the Moon!"

This is the "poetical license" of an "orificial" writer.

Dysphœmia.—

This is suggested as a scientific title for stammering.

Items and News.

Recovery of Hearing After Long Deafness.—

The patient, aged thirty-five years, was said to have been deaf from the age of nine years, and when first seen heard nothing at either meatus, owing to closure of Eustachian tubes. Daily Politzerization was instituted, and in one week she heard, at one-half inch, a feebly ticking watch; in three weeks at three inches; and after three months, hearing became normal. The case is recorded as remarkable for the extent of the recovery after so long a period of deafness, and to encourage tentative treatment in apparently confirmed cases of deafness. The mental development has been most marked since hearing has been established. Before treatment she was a good lip-reader, and could make use of a limited number of words. Now, after restoration of hearing, she is obliged to learn the alphabet of sound. At first she could not understand aural conversation at all, but now understands many words when spoken slowly. Her education has been greatly neglected.—Doctor F. F. White, in *British Medical Journal.*

Cholera and the Comma Bacilli.—

In the scientific memoirs by medical officers of India appears a paper on "The Results of Continued Study of Various Forms of the Comma Bacilli Occurring in Calcutta," by Brigade-Surgeon Lieutenant-Colonel D. D. Cunningham, F.R.S., C.I.E. It will be remembered that Doctor Cunningham is one of those cited as giving evidence in favor of the comma bacilli—a citation which is far from correct, since an imperfect report of his was accepted as positive evidence when such was only intended to be preliminary. In this paper Doctor Cunningham emphatically declares that cholera in Calcutta is not invariably characterized by the presence of any cultivable comma bacilli in the intestinal contents, and that even in cases where such organisms are present they by no means invariably give the characteristics described by Koch and ordinarily accepted as belonging to true cholera bacilli, but differ greatly in different instances both as regards their morphological and physiological properties. —*Homœopathic Recorder.*

Diphtheria and Its Associates.—

This is the title of a work by Mr. Lennox Brown which will soon be issued simultaneously from the press of the J. B. Lippincott Co., Philadelphia, and Messrs. Bailliere, Tindall & Cox, London, with promise of most complete character. Diphtheria will be considered from the three-fold point of view of public health, bacteriological science, and bedside experience; the information from all these sources being considered essential to a right appreciation, alike of the ætiology, diagnosis, treatment, and prevention of this devastating malady. The subject of antitoxin will be treated of in an appendix. The book will be illustrated with that completeness and excellence that are always to be expected from Mr. Lennox Brown, who is ever his own artist, and a novel feature will be introduced by placing the portraits of the throat as seen at the bedside in juxtaposition with the photo-micrographs of the special organisms that characterize each case.

The Scientific Housewife.—

Give me a spoon of oleo, ma,
And the sodium alkali,
For I'm going to make a pie, mamma,
I'm going to make a pie;
For John will be hungry and tired, ma,
And his tissues will decompose—
So give me a gramme of phosphate,
And the carbon and cellulose.

Now, give me a chunk of caseine, ma,
To shorten the thermic fat;
And hand me the oxygen bottle, ma,
And look at the thermostat;
And if the electric oven's cold
Just turn it on half an ohm,
For I want to have supper ready
As soon as John comes home.

Now, pass me the neutral dope, mamma,
And rotate the mixing machine,
But give me the sterilized water first
And the oleomargarine,
And the phosphate, too, for, now I think,
The new typewriter's quit,
And John will need more phosphate food
To help his brain a bit.

—*Chicago News.*

Education of the Masses.—

The following delicious scientific (?) paragraph is taken from a journal with enormous circulation, and produced ostensibly with a view to the instruction, elevation, and amazement of an ignorant proletariat:

"A foreign scientist has a new test for death. With a candle produce a blister on the hand or foot or body. If the blister, upon being opened with a needle or other instrument, is found to contain fluid of any kind, there is still life in the supposed corpse. Should it *steam* only, however, the vital spark has flown."

We fear a ribald commentator might possibly feel inclined to deduce inferences unfavorable to the future welfare of the deceased on observing the issuance of "steam" from a blister.—*Provincial Medical Journal.*

What He Should Take.—

A magistrate of Edinburgh, contemporary with "Lang Sandy Wood," the eminent physician, planned how to get from the latter a prescription without a fee. Taking advantage of a custom of the time, he invited Sandy to take his meridian with him in a "change house" near the Cross. Over the wine he gave a long account of his ailments, to which Wood listened in grim silence. At last he put the direct question: "Doctor, what do you think I should tak'?" "Tak'!" exclaimed Sandy, "why, if ye're as ill as ye say, I think ye should tak' medical advice."

Something to be Thankful For.—

A Scotch lady invited an elder in the Free Church to have supper with her, and a piece of remarkably tough veal was placed on the table. After some frantic endeavors to cut, during which the elder's plate landed on his knees, the lady said: "Ye aye said there wis something to be thankfu' for in everything; I jalouse ye wud be at a loss to fin' something to be thankfu' for in that veal?" "Not at a'," he responded, cheerfully, stopping to breathe; "I wis just thinking hoo gratefu' we should be that we met with it when it was young."

Catgut Sutures.—

One objection to the use of catgut is, that in handling with wet hands, or when it is soiled with blood or pus, it becomes slippery, and one does not feel sure that a knot tied down in the bottom of the pelvis will hold. In order to obviate this objection, Doctor Cushing, of San Francisco, after rendering his catgut aseptic, puts it into a mixture of an ounce of common resin to a pint of alcohol. He has found this mixture to preserve catgut, and to make it stick so that it will stay tied.—*Medical Record.*

Gallant Action of an Army Surgeon at Chitral.—

Surgeon-Captain H. F. Whitchurch, attached to the 24th Bengal Native Infantry, performed a feat of exceptional gallantry on the occasion of the *reconnaissance* of March 3d from Fort Chitral. Captain Baird fell mortally wounded, but Surgeon-Captain Whitchurch, although running serious danger of death or capture by the enemy, would not abandon him, but, carrying the wounded officer on his back, fought his way back to the fort.—*Medical Press and Circular.*

Inebriates.—

The report of the Departmental Division on Prisons (Great Britain) marks a very important advance toward the solution of the problem of chronic drunkenness. It is declared that the present system of "sending up" an inebriate time after time for short periods is all wrong; that he ought to be treated as an ill man and committed to an asylum for a considerable period in order to have a chance to recover.—*Medical Press and Circular.*

Association of Military Surgeons.—

This organization, after a very successful meeting at Buffalo on the 23d ult., adjourned to meet in 1896 in Philadelphia. The officers for the ensuing year are: Lewis W. Read, of Pennsylvania, President; Albert Gihon, U. S. N., First Vice-President; C. H. Alden, Assistant Surgeon-General U. S. A., Second Vice-President; E. Chancellor, of St. Louis, Secretary; Lawrence C. Carr, Cincinnati, Treasurer.

Advance in Petroleum.—

This gives interest to the question of exhaustibility of the supply following close upon the great decrease of available natural gas. In the height of the natural gas excitement the warning of science was too little heeded, and lavish waste hastened the collapse. In 1887 the atmosphere of Pittsburgh was wonderfully clear, owing to the use of this new fuel. But Pittsburgh is again begrimed and sooty.—*Nature.*

After the Bath.—

According to *Le Mercredi Médical*, Max Edel, a German bacteriologist, took a bath and then examined the water for microbes; he found that it contained 5,850,000,000! After a bath of one foot only, he estimated the number of microbes at 180,000,000.

The question now arises: When did Edel have his last previous bath?—*Medical Record.*

Good Reason for Care!—

Mrs. McTurk: "Is this liquorice powdher pure, Misther Pi-pounder?"

Pi-pounder: "Quite so, Mrs. McTurk. I make it myself from the purest drugs."

Mrs. McTurk: "Excuse me fer axin' you, but we have to be very careful nowdays, there is so much adul-therry goin' on."—*Mississippi Medical Monthly.*

A Case for Tears.—

Teasing Friend: "What makes that new baby at your house cry so much, Tommy?"

Tommy (indignantly): "It don't cry so very much—and any way, if all your teeth was out, and your hair off, and your legs so weak you couldn't stand on them, I guess you'd feel like crying yourself."

Not so Far Astray, Perhaps.—

An incident occurred the other day in one of the bacteriological laboratories in Philadelphia that is really too good to be kept. One of the students was asked the question: "What parasite frequently infests the vagina?" In all seriousness the rising young bacteriologist promptly and confidently answered: "Spermatozoa."

What Next?—

The butchers and fishmongers in England may soon be required to pass an examination in microscopy before being granted a license. The matter is being seriously considered, and the functions of the future butcher will doubtless involve not only the slaughter and sale of animals, but the scrutiny and study of animalculæ as well.

Iron.—

"Biliousness" is a contra-indication to the exhibition of iron. "So long as there is a foul tongue, a bad taste in the mouth (as if it could be any place else), and fullness of the liver, with disturbance of the alimentary canal, iron is to be prohibited; it is not only that it is of no service, it positively does harm."

Thyroid Therapeutics.—

Doctor Clark, of London, has employed Thyroid extract with very satisfactory results in chronic cardiac disease with marked weakening of the cardiac muscle, which is usually the beginning of asystole.

The Decline of the Pessary.—

No one invents a pessary nowadays, in strange contrast to the time when scarcely a man prominent in the practice of diseases of women did not invent one.—*Cincinnati Lancet-Clinic.*

Facial Eczema.—

Eczemas of the face, observed in patients suffering with nasal catarrh, especially as found in children, are rarely curable unless the nose be restored to its normal condition.

"The Wandering Jew."—

The latest reports from Mecca state that cholera is increasing. The mortality is also much heavier.—*Medical Press and Circular.*

Chicago Doctors.—

There are 3,400 physicians living within the corporate limits of the "Windy City."—*Western Doctor.*

Book Reviews.

THE YOUTH'S COMPANION. Price, 10 cents; $1.75 per year. Perry Mason & Co., Boston.

This publication advances year by year, always in the front rank of the best periodicals. It fills to-day, as does no other journal, the popular demand for a practical family paper, one that will prove of equal interest to old and young, and that moreover is always free from any objectionable feature. The ablest writers of all countries contribute to its columns, and among the more famous listed for the present year are two daughters of Queen Victoria, Mr. Gladstone—who for the third time writes expressly for the *Companion*,—Sir Edwin Arnold, William Clark Russell, Charles Dickens, Jr., Frank R. Stockton, J. T. Trowbridge, H. I. Bowditch, S. Weir Mitchell, David W. Cheever, and more than a hundred other authors of world-wide fame. The *Companion* appeals to all, whether in home, professional or business life, and to the educator and laborer alike in every department of work. Its editorials deal frankly, faithfully and concisely with questions of the day—which cannot be said of any other periodical in North America. Withal, its illustrations are unexcelled, being by the very best artists native and foreign.

THE COSMOPOLITAN. Price, 15 cents; $1.50 per year. Cosmopolitan Publishing Co., Irvington-on-the-Hudson.

The May issue contains perhaps the most beautiful series of pictures ever presented of the Rocky Mountains, being copied from a collection of fourteen original paintings executed by Thomas Moran. This number contains fifty-two original drawings, by Thomas Moran, Oliver Herford, Dan Beard, H. M. Eaton, F. G. Attwood, F. O. Small, F. Lix, J. H. Dolph, and Rosina Emmett Sherwood, besides six reproductions of famous recent works of art, and forty other interesting illustrations — ninety-eight in all. Rudyard Kipling has agreed to furnish regular contributions for the coming year, beginning his work upon his return to India. The fiction in this number is by F. Hopkinson Smith, Gustav Koppé, W. Clark Russell, Edgar W. Nye, and T. C. Crawford.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. The J. B. Lippincott Co., Philadelphia.

The complete novel in the June issue is "The Battle of Salamanca," a stirring tale of the Napoleonic wars, from the Spanish of

Benito Pérez Galdós; there follows a brief account of "Galdós and his Novels," by the translator, Rollo Ogden; "William Shakespeare: His Mark" is by William Cecil Elam; "As a Day in June" is by May D. Hatch, "Interwoven Strains" by J. Percival Pollard; John Gilmer Speed writes on "Improving the Common Roads;" W. D. McCracken furnishes an essay on "The Referendum and the Senate;" Doctor Charles C. Abbott gives an interesting study of "Thoreau;" Sidney Fairfield writes of "The Tyranny of the Pictorial," in which he complains that pictures occupy too largely the place of reading matter; "Beret in Aravaipa Cañon" is by William Thomson, in which he relates a wild Western venture of long ago. The poetry of the number is by Ella Gilbert Ives and Madison Cawein.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

In the June number Melville E. Stone writes of "Chicago—Before the Fire, After the Fire, and To-day;" "A History of the Last Quarter-Century in the United States" is continued by E. Benjamin Andrews. There is another installment of Mrs. Ward's serial story, "The Story of Bessie Costrell;" Abbe Carter Goodloe writes of "The Genius of Bowlder Bluff." "The Amazing Marriage" (XXI–XXIV), by George Meredith; "The Art of Living," by Robert Grant; "American Wood-Engravers," by Frank French; "The Gentleman from Huron," by George A. Hibbard; "A Coöperative Courtship," by Annie Steger Winston, and "The Edge of Clermont Hill," by Henry Van Dyke, complete the number.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Company, New York.

The June number is one of the best publications of the month. Beaumont Fletcher's review of "Trilby" as a play is one of the best and most comprehensive that we have yet seen; W. A. Cooper has an article on "The National Academy of Design;" "How Tweed Was Detected" is by Henry Mann, who reported the proceedings of the famous trial. Besides these, there are short stories, essays, illustrated articles, book reviews, poems, etc.

GARDEN AND FOREST. Price, $4.00 per year. Tribune Building, New York.

This beautifully illustrated journal of horticulture, landscape art and forestry began its eighth volume with January last. It is filled every week with fresh, entertaining, practical, and accurate information for all who love nature or take an interest in trees, shrubs, and flowers. It figures new plants, and describes new horticultural processes; it is a current record of all practice and progress in the parks and groves and forests of the world. It is indispensable not only to the practical horticulturist, botanist, landscape-gardener, and forester, but to every owner of a country or suburban home who desires information in all branches of ornamental and economic planting.

THE ELEMENTS OF BOTANY. By Asa Gray. Cloth; 16mo; pp. 386. American Book Co., New York and Chicago.

This work consists of "Lessons in Botany," and the "Field, Forest and Garden Botany," bound together in one complete volume, forming a most popular and comprehensive text-book adapted to use either for reference or teaching; in fact, it has no equal as a handbook whereby to analyze plants and flowers in field-study of botany. Beginning with the first principles it progresses by easy stages to the most intricate portions of botanical science. It is likewise a grammar and dictionary of botany and comprises the common herbs, shrubs and trees of the Northern, Southern and Middle States and of Ontario and Quebec, including those commonly cultivated as well as native species in fields, gardens, pleasure grounds, and house culture; even the ordinary conservatory plants are listed and described.

This work supplies a great desideratum to the botanist and botanical teacher, and is especially available for the library of American physicians who, unfortunately, rarely have that familiarity with botany which is so carefully inculcated in those educated abroad.

THE PRACTICE OF MEDICINE. By Edwin M. Hale. Sheep; 8vo; pp. 1018. Gross & Delbridge, Chicago.

This work is very complete, and, though intended more especially for practitioners of homœopathy, is by no means an exponent of a special system of medicine, but exhibits a most liberal tendency toward what its author styles the "old school." The views expressed are most practical, and while Doctor Hale is at times somewhat dogmatic, such is the dogmatism of emphasis and honest conviction. He endeavors to teach medicine on the basis of a universal science rather than as a specialism. His descriptions of the clinical phenomena of disease are terse and to the point, and made especially interesting by numerous historical references not usually

found in works of this class. The chapters are brief, the subjects numerous, and the discussions interesting and suggestive. It will be observed that the subjects are brought up to the latest date, and the treatment of membranous colitis, persistent tachycardia, brachycardia, etc., is extremely full.

Immunity, Protective Inoculation in Infectious Diseases, and Serum-Therapy. By George M. Sternberg, M.D., LL.D. Cloth; 12mo; pp. 325. Price, $2.50. William Wood & Co., New York.

This is uniform with other numbers of the "Medical Practitioners' Library" emanating from these well known publishers. Just now when so much interest is felt in the subject of serum-therapy, this volume becomes of special interest to the medical profession, particularly in that it is the work of one who has devoted his life to the study of bacteriology and its application to medicine. The author gives a summary of the most important experimental evidence in the field of research to which this work relates. Little space, however, is given over to the discussion of moot questions connected with this subject—which, perhaps, is an advantage rather than otherwise. As a matter of fact, however, the most important results of experiment made by experienced bacteriologists have been concisely stated.

Suggestive Therapeutics in Psychopathia Sexualis. By Doctor A. von Schrenck-Notzing. Cloth; 8vo; pp. 325. Price, $2.50. The F. A. Davis Co., Philadelphia.

This is a companion work to the Psychopathia Sexualis of Krafft-Ebing, and is rendered into English by the same translator, Doctor Charles G. Chaddock, of St. Louis.

There is a great deal that is of interest embodied, yet we hardly realize any practical advantage to be obtained from it over and above the previous work by Krafft-Ebing. It is, however, a very desirable contribution to the subject to those who are interested in its literature.

Life of Henry Ward Beecher. Paper; 12mo; pp. 130. Price, 25 cents. Rand, McNally & Co., Chicago.

This is Number 25 of the Globe Library, and presents a very succinct and concise account of one of the most eminent of America's pulpit orators. Whatever may be the judgment of the individual regarding the religious and moral character of Mr. Beecher, he must still be recognized as a notable man who did not fail to leave his impress upon American sociology. The volume is most interesting.

Treasure Island. By Robert Louis Stevenson. Paper; 12mo; pp. 238. Price, 25 cents. Rand, McNally & Co., Chicago.

This is number 198 of the Globe Library, and one of the last and best of Stevenson's works. It is emphatically a tale of the days of piracy, and thrilling in the interest excited from title page to finis. No admirer of this popular author can afford to miss "Treasure Island." The delineations of character are such as only Stevenson could pen.

Notes on the Newer Remedies. By David Cerna Ph.D. Cloth; 16mo; pp. 253. Price, $1.25. W. B. Saunders, Philadelphia.

This is a second, revised and enlarged edition of this work, which takes up in alphabetical order the newer remedies, giving their physical qualities, solubility, therapeutic applications, etc.

Treatment of Wounds, Ulcers, and Abscesses. By W. Watson Cheyne. Cloth; 12mo; pp. 207. Price, $1.25. Lea Brothers & Co., Philadelphia.

The author describes the method of treatment which he employs and deems to be the "simplest consistent with certainty of results."

Index of Medicine. By Seymour Taylor. Cloth 12mo; pp. 801. Price, $3.75. Lea Brothers & Co., Philadelphia.

The title is a misnomer, the volume being simply a compendium of the practice of medicine, intended, as the author declares, "for the use of senior students."

Guide for the Laboratory Bacteriologist. By Langdon Frothingham, M.D. Flexible cloth 8vo; pp. 61. Price, 75 cents. W. B. Saunders, Philadelphia.

This is simply what it purports to be technical knowledge arranged with a view to facilitate laboratory work.

Blood-Serum Therapy and Antitoxin. By George E. Krieger, M.D. Cloth; 16mo; pp. 70. Price $1.00. E. H. Colgrove & Co., Chicago.

A revamping of the contributions that have appeared upon this subject from time to time in the medical press.

Syllabus of Gynæcology. By J. W. Long, M.D. Cloth; long 32mo; interleaved; pp. 133. Price $1.00. W. B. Saunders, Philadelphia.

This is intended both as a note-book and remembrancer during lectures, and hence is of special utility to the student.

Therapeutic Brevities.

Leucorrhœa in the Unmarried. — In the eatment of leucorrhœa in young unmarried omen, instances frequently occur in which ıe usual practice of making an examination) ascertain the condition of the pelvic ıscera is so obnoxious to the patient, or so rmly opposed, that the physician is forced) abandon it and have recourse to medicine. In such cases, Doctor Slocum (*Cincinnati ancet-Clinic*) depends upon the specific ac- on which Cantharides appears to exercise pon the cells constituting the genital as ell as the urinary system. It is probable ıat, by direct stimulation of the cells just to ıe point of successful resistance, the benefit secured, as the dose is very small. Stran- ury or other unpleasant symptom has not een produced. The action of the drug has een so uniformly satisfactory that when it ails such result forms a strong basis for sus- ecting the presence of something more than mply hyperæmia or mild inflammation. essening of the discharge is sometimes oted within five days, but in several cases of rofuse discharge of four years' and longer uration the treatment was not successful ntil after a month's persistent use.

The formula which has seemed the best is:

Tincture of cantharides, 96 minims.
Tincture ferric chloride, 160 minims.
Dilute phosphoric acid, 160 minims.
Syrup of lemon, 2 fluidounces.
Water, sufficient to make 4 ounces.

One teaspoonful, in water, after meals.

—*Maryland Medical Journal.*

The Treatment of Obesity.—In the May 15th sue of the *American Medico-Surgical Bulletin* ppears a paper by Doctor Frederick Gutt- ıann on "The Treatment of Obesity," in hich the use of Thyreoidin tablets is re- orted. Five cases are cited in which the esults were extremely beneficial, the final ne being the author himself, who between Iay 12th and September 27th reduced his eight from 247 to 227 pounds under an verage dose daily of ten grains of Thy- oidin. He was obliged to begin the treat- ıent with two-grain doses three times daily, rdering likewise a diet of meat and fruits ith no alcohol and little or no water. Doc- or Guttmann concludes:

"I have come to regard the thyroid gland f the sheep as a '*specific*' in obesity; one ıat is free from the dangerous and injurious fter-effects, and whose beneficial effects ap- pear within a few months from the beginning of the treatment. The only risk is in begin- ning with large doses, as palpitations and fainting fits are possible until the patient is well accustomed to the drug. The agent, however, is not to be used indiscriminately. The Thyreoidin has likewise given excellent results in acromegaly, myxœdema, Basedow's disease, and various cutaneous affections. I have tried thyroid gland in pulverized form, and the Thyreoidin of Parke, Davis & Co., and greatly prefer the latter."

Chronic Aural Catarrh.—The most frequent cause of deafness is catarrh of the naso-pharynx (nose and throat), as a result of which either the disease extends by continuity of surface through the Eustachian tubes, or the presence of hypertrophies and other lesions of naso-pharyngeal disease interferes with the normal blood-supply of the tubes and middle ear. It is a most unfortunate circumstance that chronic catarrh of the middle ear is ordinarily a painless affection, unaccompanied by more disagreeable symptoms than occasional noises in the ears and gradually increasing deafness, for it is largely in consequence of this fact that Von Troltsch long ago was able to state as the result of his investigations that at least one man in three past adult life had impaired hearing in one or both ears. If chronic catarrh of the middle ear were not so insidious and painless an affection, it would not be allowed to progress in so many instances until its victim was hopelessly deaf or could at most hope to have his hearing partially restored only as the result of somewhat uncertain operations. It should hence be considered an important part of aural hygiene that naso-pharyngeal disease should receive proper attention before progressing sufficiently to impair the integrity of the middle ear.—*Brief.*

Croton Oil for Ringworm.—An epidemic of ringworm, of the variety *tricophyton megalosporon endothrix*, occurred recently in an orphan asylum, forty-eight out of seventy children being affected. Croton oil, which is a destructive rather than a curative agent, was employed.—It requires to be carefully handled so as to regulate the amount of destruction, and never used for patches larger than a sixpence. It is necessary to first test the resistancy of the individual skin, hence a commencement is best made by applying a drop of oil, which it is well to remember exerts an effect beyond the spot to which it is applied; this is permitted to remain a

few seconds, then vigorously wiped off with absorbent wool. By the degree of irritation produced upon the third, or even the second, day, one can form an idea of the degree of toleration, and in subsequent operations act in accordance therewith, permitting the drop to remain a longer or shorter time. A slight folliculitis is thus occasioned, and the procedure can be repeated, when, after the separation of the crusts, the inflammation has subsided. In this way the diseased hairs can be reduced to a continually diminishing number, and when these are only six or eight at most they can be destroyed by electrolysis.—*Annales de Dermatologie et de Syphiligraphie.*

Tobacco-Smoking for Invalids.—In the majority of surgical affections smoking is permissible, with the exception of convalescence from operations upon the bladder and abdomen. Patients with diseases of the eyes, nose, throat or pharynx should never smoke. The internal diseases which will not permit smoking are peritonitis, typhoid fever, and similar affections. In stomach affections, smoking may be allowed if the smoke be filtered. Patients with organic heart diseases should smoke as little as possible. In lung diseases, under certain circumstances, smoking is often beneficial; also to syphilitics. In those with nervous diseases there is no general rule; sudden withdrawal often does harm, while in cardiac neuroses only a very weak tobacco with filtration of the smoke is allowable. To smoke in the sick-room where there are several patients present is hardly to be commended. The best time to smoke is several hours after meals.—Doctor Jankau, in *Zeitschrift für Krankenpflege.*

Therapeutics of Menthol.—In hay fever, William Hill, of London, has found Menthol to serve an excellent purpose as a substitute for cocaine. He applies a ten- or twenty-per-cent. solution in olive or almond oil to the sensitive area within the nose by means of a brush or atomizer. In the chronic bronchitis of old age, Nyes speaks favorably of inhalations of Menthol, which, he says, not only facilitate and rapidly diminish the expectoration, but also allay the cough and reduce the number of paroxysms. These inhalations have also been used with good effect in whooping-cough. Finally, the same mode of application has proven useful in Jore's hands in relieving asthma. Inhalations of a twenty-per-cent. solution in olive oil were then tried, with the most satisfactory results—the rattling râles disappeared almost immediately, and the respiration soon became normal.—*Medical Brief.*

Actæa Racemosa.—If I were compelled to practice medicine with just *one remedy*, Cimicifuga would be my choice. In the treatment of rheumatism, muscular or articular, acute or chronic, it is superior to all other drugs. I am a rheumatic subject, having had three attacks of inflammatory rheumatism, two of which confined me to my bed three months respectively, and after getting up I was in each case obliged to use crutches three months in order to walk. Since I began to use Black Cohosh I have never had an attack but would yield in two or three days to the use of this remedy, in four- or six-drop doses, four times a day. For the last twenty years I have treated a great many cases of rheumatism, with the best of results. The worst cases that have come under my notice have been able to walk in eight days from the time treatment began.—Doctor David Hurd.

Cocaine Anæsthesia.—The danger from use of cocaine is very much lessened when employed in minor operations if the drug is injected in the subcutaneous cellular tissue in the region of the nerve trunk, instead of near the diseased tissues. The advantages of this method are: It is not necessary to make the injection in the field of operation: Very extensive areas of anæsthesia may be produced by minute doses of cocaine: When the injection is made in the neighborhood of a nerve, both the skin and the deep tissues are anæsthetized. These improved procedures will doubtless greatly increase the utility of cocaine as an anæsthetic.—Doctor A. Krogins, in *Centralblatt für Chirurgie.*

Tinnitus in Aural Sclerosis.—Doctor R. W. Seiss recommends as the most advantageous methods of controlling "this never altogether curable disease:" Proper treatment of the naso-pharynx first; methods directed to the Eustachian tubes next; immediate local treatment of the tympanum last. The best form of tubal medication in tinnitus of catarrhal origin consists in injections of some oleaginous fluid containing one-half grain of camphor and two grains of menthol to the fluid-ounce, by means of the Eustachian catheter. Menthol vaporization is also recommended for allaying tinnitus dependent upon tubal congestion and inflammation.—*Annals of Ophthalmology and Otology.*

The Treatment of Diphtheria.—The early use of strong hydrochloric acid, especially in cases beginning on the tonsils:

Local cleanliness by the use of a weak antiseptic solution in the pharynx:

Nasal syringing with the same solutions in every case where there is nasal discharge:

Alcoholic stimulants begun as soon as the first systemic effect of the poison is seen, and in very severe cases pushed to the point of tolerance:

Calomel fumigations as soon as laryngeal symptoms appear:

Intubation in laryngeal cases not relieved by fumigations.—Doctor Emmett Holt, in *Archives of Pædiatrics.*

Purgation in Gynæcological Diagnosis.—Doctor Baldy declares that the symptoms presented by a woman whose pelvis is filled with fæcal masses, and whose pelvic circulation is consequently impeded and rather sluggish, are markedly different from those of one who has had these disturbing factors removed. Many women return after the administration of an active purgative claiming that they are entirely well of their headaches, back-aches, and abdominal pain.—*Philadelphia Polyclinic.*

Spigelia in Headache.—This drug is very useful in left-sided facial neuralgia when the infra-orbital and maxillary branches of the fifth pair are involved. These pains are tensive, burning, throbbing; are worse when lying down and better when sitting up. Cold or warm applications assist in relieving. Occasionally the pain is as if red-hot needles pierced the skin, and it comes and goes suddenly.—Doctor S. F. Shannon, in *Homœopathic News.*

Constipation.—Do not let your mind dwell upon podophyllin, magnesia salts, and the like, but prescribe normal liquid Nux Vomica, one drop in half a glass of water every night at bedtime. This will effectually relieve many cases of habitual constipation.—*Exchange.*

Strychnine.—In paraplegia of reflex origin, in rheumatismal paraplegia, in syphiloma of the spinal meninges, paraplegia continuing after the removal of the deposits, according to Bartholow, Strychnine is a most serviceable remedy.—*Medical Review.*

Gleet.—Chlorate of potash, in one- to two-per-cent. solution, is an excellent injection for gleet. A weak solution of permanganate of potash is also often beneficial. For internal administration, nitric acid and thuja are advised.—*Monatsblatter.*

Tincture of Iron Made Pleasant.—Doctor C. Klippel gives muriate tincture of iron in seltzer water. This makes an exceedingly pleasant drink and overcomes the tendency to constipation so often complained of by patients taking iron.

Abortion.—Here Asafœtida is very useful, besides being harmless to the general system. It is valuable in any of the nervous symptoms incident to pregnancy, and best given in pill form.—*Le Progrès Médical.*

Euthymol will be found a most valuable adjuvant to the diarrhœa mixtures prescribed for children with entero-colitis and kindred troubles. As an internal antiseptic it is unexcelled.—*Medical Times.*

Aralia Racemosa.—This remedy is useful in asthma, and is often of exceeding benefit in so-called "hay fever." In cough, spasmodic in character, it is also beneficial.—*Homœopathic Annual.*

Diphtheria.—Lemon-juice is said to exert a powerful influence upon the micro-organisms of diphtheria. The remedy is certainly simple and not disagreeable to use.—*New York Medical Times.*

Uterine Inertia.—Give Normal Liquid Ergot. Put a drachm in fifteen teaspoonfuls of water, and beginning early give a teaspoonful every ten or fifteen minutes.—*Polyclinic.*

Trillium Pendulum.—Is spoken of as an especially useful remedy in enlarged uterus, and also as remedial in hæmorrhage from this organ.—*Exchange.*

Migraine.—It is stated that ten drops of fluid extract Saw Palmetto has aborted many cases of sick headache.

Tachycardia.—Arseniate of Strychnine is recommended in cases of tachycardia strumosa.

Medical Progress.

RICHARD OWEN.—Richard Owen was born July 20th, 1804, at Lancaster, in a house which is still standing in Thurnham street. At the age of six years he was sent to the old Lancaster Grammar School, where he was a contemporary with Whewell, a carpenter's son, who became the famous Master of Trinity. In 1820 he was apprenticed to a Lancaster surgeon and apothecary. His master dying in 1822, he was transferred to a Mr. Seed, and in 1823 he had to find a third master, in consequence of Mr. Seed accepting a post in the Royal Navy. It was during his apprenticeship that the two episodes transpired of which in later years he gave an account in *Hood's Magazine*. Although these are pretty familiar, the story of the negro's head is sufficiently unique to tempt quotation here. To use Professor Owen's own words: "My worthy preceptor was called out one evening to the case of a sailor who was brought home in an apoplectic fit after receiving a heavy fall in a drunken fray at a public house. The doctor found it a hopeless case, and the man passed from his stupor into death. After his death his widow and daughter retired to one of the little houses which face the steepest part of the hill leading to the castle gates. One evening they were talking about the slave trade, in which occupation it appeared the unfortunate husband and father had spent a large part of his active life. The two women had finished their meal and were sitting before the fire, by the light of which they were holding their conversation. The mother was feebly attempting to make a case in defense of the traffic, when on a sudden the attention of both was roused by a sound of footsteps rapidly approaching the door, which was immediately burst open by a heavy blow. A piercing shriek came from the mother, who rushed into the adjoining bed-room; the daughter started and turned towards the cause of the noise and her mother's fright, and saw what she afterwards described as the phantom of a negro slave lying on the floor, which turned its ghastly head and glared for a moment upon her with white protruding eyeballs. A figure in black entered as she fled screaming after her mother. When the two terrified women ventured at length to glance into the room from which they had been scared, all was quiet; the red glow from the fire showed everything to be as they left it. What could this be except an apparition of the captain with his negro slave, and the old gentleman himself in black pursuing them?" The true cause of the apparition was rather more substantial, but scarcely less shocking. Owen had begun to make a craniological collection, and having had one day to assist at the necropsy of a negro who had died in the castle, which is also the county jail, he was seized with the desire to add the skull of the Ethiop to his collection. Accordingly the same evening, a frosty one in January, he revisited the castle, and, being on good terms with the turnkey, proceeded to the room in Hadrian's tower to possess himself of the coveted specimen. He had provided himself with a strong paper bag, and into this he placed the skull, covering the whole with his cloak. As soon as he was outside he began to hasten down the hill, but his foot slipped upon the ice covered pavement, he fell forward, and the skull jerked out of the bag, rolled down the declivity, and struck the cottage door of the widow and her daughter, finding a resting-place for an instant upon the floor of the room. Owen dashed desperately after his prize, and, gathering it into his cloak, ran off and never stopped until he reached the surgery.

Owen matriculated at Edinburgh in 1824, and in the following year came to London and became prosector to Doctor Abernethy, who in 1826 started him upon his distinguished and honorable career by procuring him the appointment of assistant to the Conservator (Mr. Clift) of the Museum of the Royal College of Surgeons. The appointment was made with a view to Owen undertaking the arrangement of the collections formed by John Hunter, which had recently been placed in the care of the college. In subsequent years Owen and Mr. Clift's daughter were married. The union must have been an almost ideal one. Throughout these volumes respectful love and care for his wife are exhibited in all Owen's letters and actions. And on her part a loving devotion to, and veneration for, her husband are modestly manifested.

From this point Owen's life was one long continuous accession of honors and pleasure, The proverbial ups-and-downs never came within his experience. He appears to have been spared all sorrows, excepting those which make the fundamental bass of all the music of mortal life. But so far from spoiling his spirit, from unduly elevating him, the honors which were literally showered upon him only seem to have increased the thankfulness of a disposition which was not envious in the slightest degree. His enjoyment of life was intense, and this was a consequence of his intense love for his work. It is apparent that he experienced the satisfaction born

of well earned reward, but there is no evidence that this feeling ever gave birth to arrogance; rather he was humbly grateful that his powers were competent to earn his rewards.

He writes in the year 1830: "I made Cuvier's personal acquaintance at the Museum of the College of Surgeons, and was specially deputed to show and explain to him such specimens as he wished to examine. There was no special merit in my being thus deputed, the fact being that I was the only person available who could speak French, and who had at the same time some knowledge of the specimens. Cuvier kindly invited me to visit the Jardin des Plantes in the following year." To a man of Owen's tastes a meeting with the great anatomist must have been big with desires for ambitious work in the future. The acceptance of Cuvier's invitation in the succeeding year doubtless confirmed the desires as resolutions.

Owen's friendship with the Reverend Doctor Buckland seems to have begun when Owen was twenty-eight years of age, by his sending Doctor Buckland one of the proofs of his work on the Pearly Nautilus, together with a letter in which he says: "Since the decease of the lamented Cuvier, there is no one whose opinion of this work I look for with more anxiety than your own." The friendship between these two leaders of scientific thought and research became very close and cordial. The year 1834 witnessed Owen's appointment to the professoriate of comparative anatomy at St. Bartholomew's, and his election as a Fellow of the Royal Society. In 1836 he was appointed Hunterian Professor at the Royal College of Surgeons. This latter appointment was a source of peculiar gratification to him, and the twenty-four annual lectures which he delivered from this chair were the result of his best thought and work. Up to 1837 Owen had to some extent cultivated a medical practice, but, experiencing a pressure of scientific work, he decided to relinquish it altogether and devote himself entirely to research. He was an indefatigable dissector and his opportunities were many. The animals which died at the Zoölogical Gardens were at his disposal, and so rapidly had his fame as an anatomist spread that specimens were forwarded to him from every quarter of the globe. Everything that was new to him was subjected to his keen knife and keener observation. A note in Mrs. Owen's diary is as follows: "The defunct rhinoceros (late of Wombwell's menagerie) arrived while R. was out. I told the men to take it right to the end of the long passage where it now lies. As yet I feel indifferent, but when the pie is opened——." Six days later she writes: "R. still at the rhinoceros."

The story of Owen's clever deduction as to the presence of the remains of a large terrestrial bird as large as an ostrich, in New Zealand, is given in full by his biographer. It is an excellent example of the application of his powers of observation as well as of his method of ratiocination. From a fragment of bone only six inches in length he reconstructed the skeleton of the *Dinornis* which was afterwards to be found. No wonder the Committee of the Zoölogical Society refused to endorse this bold conclusion, and only with hesitation consented to publish his paper in the "Transactions" with the proviso that the responsibility of it rested exclusively with the author. The subsequent verification of his conclusions was so complete that when a perfect femur arrived, and was placed over the drawing of one made by him when he was in possession of the small fragment only, they coincided perfectly.

The round of scientific work, followed with such zest, was, nevertheless, not allowed to become the round of life. Science never caused him to degenerate, as it has caused so many others, into a bore. If Carlyle, whose keenness of scent for every species of cant was so pronounced, could speak of him as a man who "was neither a fool nor a humbug," there is every reason to believe that the negative praise was thoroughly deserved. Owen was a confirmed but discriminating novel-reader; a proficient chess-player; a cultured musician, being a good executant upon the 'cello, and a frequenter of the playhouse. Being thus a man of taste, and having secured an early introduction into the best society of London, he was in constant requisition at all the society functions of his day.

A considerable share of work in connection with the organization of the Great Exhibition of 1851 fell to his lot. He was also a Juror of the Universal Exhibition of Paris in 1855. For his services in connection with this he was created a Knight of the Legion of Honor.

In 1856 Owen was appointed to the new office of Superintendent of the Natural History Department of the British Museum. This was done at the suggestion of Lord Macaulay, whose attention had been drawn to the possibility of this department being neglected unless placed under the control of a man of science. Macaulay was also actuated by a desire to make suitable provision for Owen, who, he wrote, "is an honor to our country. . . . A poet, a novelist, an historian, a painter, a sculptor, who stood in his own line as high as Owen stands among men of science,

could never be in want except by his own fault. But the greatest natural philosopher may starve while his countrymen are boasting of his discoveries, and while foreign academies are begging for the honor of being allowed to add his name to their lists."

Wisely, we think, has his biographer devoted a chapter to the account of Owen's scheme for a natural history museum which should be of adequate proportions and of suitable arrangement for such a display of the large collections of specimens which were stored away in Bloomsbury as should be at once interesting to the ordinary visitor, educational for the student, and easy of access to the scientific worker. After twenty-five years' advocacy of his scheme, and of fluctuating hopes and fears, begotten of our system of party politics, Owen was permitted to realize in large measure his desires in the form of the present Natural History Museum at South Kensington. A fitting memorial of a devoted scientist!

When the Prince and Princess of Wales visited Egypt in 1869 Owen was asked to join the party. The extracts taken from the letters he wrote upon this occasion consist largely of gossipy items of a very pleasing character. One of these tells how M. de Lesseps endeavored to play a trick upon him. Describing his visit to the Suez Canal, he writes: "The steamer had taken us to sea so that we might view the piers of huge artificial blocks of stone intended to keep open the entry of the harbor. We then returned to inspect the artificial stonework. M. de Lesseps, with an innocent air, brought me a piece of stone with some shells embedded in it, and asked me what formation it belonged to. I said it was the most recent I had seen, and from the fossils evidently new to geology; on the whole, I should describe it as *la formation Lessepsienne*,—which pleased the old gentleman amazingly."

With the year 1883 Owen ended his official connection with the Natural History Museum, and retired to his home, Sheen Lodge, with its beautiful garden, to spend his declining years in peaceful enjoyment of such simple pleasures as are compatible with the burden of fourscore years. It was meet that nine quiet years should round off to completeness the otherwise arduous life of this truly great scientist.

Some notion of the magnitude of his labors may be gathered from the forty-nine pages chronicling the six hundred and thirty-eight articles contributed by him to general and scientific literature. Four pages are occupied with a list of the various distinctions conferred upon him.

Professor Huxley has contributed a lengthy chapter on "Owen's Position in the History of Anatomical Science," from which it appears that it is upon Owen's discoveries in anatomy and palæontology rather than upon his philosophical speculations that his reputation will find its foundation. "His claims to high place among those who have made great and permanently valuable contributions to knowledge remain unassailable."—*Pharmaceutical Journal.*

The Blood in Ether Anæsthesia.—There are four stages of anæsthesia: Stage of stimulation; anodyne stage; anæsthetic stage; and paralytic stage. The prolonged and difficult reaction often seen in anæmic cases after ether anæsthesia is unquestionably due to the diminution of hæmoglobin caused by the ether. Ether pneumonia may be due to the effect of the intense cold upon the lungs produced by the ether-vapor, and œdema of the lungs may arise from a contraction of the pulmonary capillaries, and consequent loss of *vis a tergo* and damming-up of blood in the veins; and this condition may produce sudden paralysis of the heart. Prolonged anæsthesia profoundly deteriorates the blood and strongly militates against recovery; hence rapidity of operation is most desirable.—J. C. DaCosta, in *Medical News.*

Extreme Cardiac Dislocation.—A clearly illustrated case of extreme left cardiac displacement occurred in a woman aged forty-six. The apex beat was distinctly audible under the scapula, and the præcordial dullness could be made out to the left side posteriorly immediately over the hepatic and splenic areas of dullness, while at the usual position of the heart on the left front there was pulmonary resonance. The cause of this displacement appeared to be arrested development of the left lower pulmonary lobe.—Doctor Heyse, in *Centralblatt für Klinische Medicin.*

A New Foramen.—Doctor J. W. Hartigan, Professor of Human and Comparative Anatomy in the West Virginia University, claims to have discovered a foramen in the base of the transverse process of a lumbar vertebra in the human subject. This, he declares, has never been noticed by any anatomist, so far as he is informed. Henle's case was one of union, by a bridge of bone, of the mammillary and accessory processes, an entirely different thing.—*Medical Review.*

The Medical Age.

VOL. XIII. DETROIT, JUNE 25th, 1895. No. 12.

Original Articles.

ON CHOLE-LITHIASIS.

BY JOHN A. OUCHTERLONY, A.M., M.D.

This name, derived from the Greek (*Χολη*, ile, and *λιθος*, a stone), is used to designate hat state of the system in which biliary calculi re formed. This disease, without being one f the most frequent, is yet far from rare. A ood deal of practical knowledge concerning has already been accumulated, yet we must dmit much remains to be acquired, and uch is still shrouded in obscurity.

This paper is based upon the study of irty-five cases, and is offered as embody- ng the results of study and clinical experi- nce with a disease which for years has been f deep interest to me.

It has been suggested by several distin- uished observers that the formation of gall- ones depends upon a peculiar diathesis; and n support of this view they allege that in many f these patients there is an evident predis- osition manifested by a constant formation f gall-stones, and this in spite of all treat- ent; that the disease is often hereditary; hat there is a certain close connection be- ween the state of the system that induces he formation of gall-stones and that which esults in the formation of urinary calculi; nd, finally, that this constitutional state is *out*. I have not been able to corroborate his view; on the contrary, I have been com- elled to regard this disease as due to local r general causes entirely independent of ny diathesis whatever.

Some cases are rebellious and obstinately esist all efforts; but when one reflects how ifficult it is to continuously and completely ontrol these patients, and when the various eatures of the disease are taken into account, his rebelliousness to treatment is more eadily explained by the persistence of local causes without assuming the existence of a peculiar constitutional vice.

In only two of my cases were any of their ancestry known to have had gall-stones, and I therefore conclude that heredity plays but a feeble part in their production. Morgagni thought that *hepatic colic*, in a patient subject to *urinary calculi*, gave strong reason for suspecting the existence of biliary calculi, especially if the patient were an adult. Subsequent writers have noted the coexistence of these two forms of lithiasis, and have expressed a belief in their mutual connection. I am led to believe it is quite rare and incidental, for it was not observed in a single one of my thirty-five cases. Neither did I ever find any of the usual manifestations of gout in the persons I have treated for gall-stone. Gout is notoriously uncommon in women, but it is especially in this sex that gall-stones are most often found.

The ætiology of gall-stones is one of the "dark points" upon which much additional light must be shed before our knowledge concerning them can be satisfactory and complete. Age is one of the general conditions operating at least as a predisposing cause. Gall-stones are most common after middle age—my oldest case was a woman seventy-six years old; my youngest another woman aged twenty-two. They have, however, been found in children *ten* and *two* years old, and even in new-born infants. These very young subjects did not, so far as I can learn, suffer from hepatic colic, and the presence of the concretion was only recognized after death. I do not know what is the earliest recorded age at which they have begun their travels and thereby occasioned trouble. The greater susceptibility of women than men to this disease is well known. It is said to be in the proportion of three of the former to two of the latter. In my cases the difference was even more marked, being twenty-nine women to six men.

The majority of persons suffering from chole-lithiasis are large eaters, and fats enter prominently into their dietary; Jaccoud insists that they are generally corpulent, and a tendency to obesity was noticed by me in thirty out of thirty-five. A sedentary life predisposes to chole-lithiasis by obstructing that process of tissue metamorphosis whose rapidity and perfection is so essential to health; it also promotes deposition of biliary constituents in the gall-bladder, which is strongly favored by *too prolonged intervals between meals*, and indeed by any retardation of the flow of the bile. Diet undoubtedly has a certain influence in the production of gall-stones, both in man and in some of the lower animals. Precipitation of the solid constituents of the bile may be determined by a variety of local conditions, which I will mention in detail. The general conditions just set forth act at most as a predisposing cause, which, without the action of a local cause, would be wholly inoperative so far as the development of gall-stones is concerned.

It has been observed that biliary calculi are more frequent in the gall-bladder of stall-fed oxen, and sheep that have been fed on dry hay, than in those that have been at pasture. I have inquired as to the occurrence of gall-stones in horses, with the hope of throwing additional light on the general ætiology of this disease, but have been surprised to learn that among equines it is so rare that only one case has been recorded. Percival* believes this immunity is due to the simplicity of the biliary apparatus in these animals.

Increase in the solids of the bile to such amount that the physiological solvent can no longer hold them in solution, the excess being thrown down and forming biliary calculi, is first among local causes. This mode of formation is beyond the reach of demonstration, but one can readily conceive it to be possible, and certain facts render it quite probable: gall-stones become frequent at the age when the bile contains a larger amount of cholesterin, and Chevreul has shown that in several persons with chole-lithiasis the bile was excessively charged with fats.†

A diminution in the amount of biliary solvents, cholate and choleate of soda and potassa, causing a precipitation of solids normally held in solution, is also a local cause. This mode of formation is still less capable of demonstration than the former, but is rendered probable by the effects observed on administration of biliary salts in certain cases of chole-lithiasis.

Next must be regarded as a prominent factor the presence of foreign substances in the gall-bladder. Doctor Thudicum* notes that in some cases the nuclear part is composed of casts of the bile-ducts, and the central part often consists of small concretions of bile-pigment which have fallen from the smaller ducts. A clot of blood, a globule of mercury, a fruit-stone, have been found as nuclei of gall-stones. In one case the nucleus was composed of a lumbricoid worm, in another it was a pin. This is doubtless a rare mode of formation, but it does occur, which shows that when once a nucleus exists biliary matters tend to become deposited around it.

Catarrhal inflammation of the biliary passages is probably the most efficient and most frequent cause of gall-stones. In health all the constituents of the bile are held in solution, probably by the *cholate of soda*. But when catarrhal inflammation of the mucous membrane of the gall-bladder sets in, its solvent power is lost, the bile is decomposed and its solids are thrown down either in the form of a pulverulent mass or larger particles which tend to increase by continued accretion.†

Doctors Thudicum and Gomp. Bezanez have shown that when bile is allowed to stand for a long time in a bottle, acid decomposition takes place spontaneously, and pigment previously dissolved is deposited. That the influence of catarrhal mucus in the gall-bladder plays an important part in the decomposition and precipitation of bile, and the subsequent formation of calculi, is rendered still more probable by analogous changes in the urinary bladder owing to cystitis, so familiar to all that more extended mention is superfluous.

Another suggestion made by Thudicum is

*On the Diseases of the Digestive Organs of the Horse. London, 1855.

†Jaccoud, Pathologie Interne.

*Thudicum on Gall-stones, page 166.

†Jaccoud, *loc. cit.*

that decomposition of bile may also be due to a putrid ferment absorbed by the intestine; but of this I have seen no proof, nor of its agency in the production of gall-stones. Catarrh affecting the biliary passages within the liver may, though rarely, produce a similar result as when affecting the gall-bladder.

The usual seat of gall-stones is in the gall-bladder. They are less commonly found in the cystic, hepatic, or common bile-duct, and it is only seldom that they are found occupying the biliary canals within the liver. In this latter locality they are invariably quite small. Their volume varies from the small size of sandy particles to that of a hen's egg, and even larger,* and is in inverse ratio to their number.

When there is only a single calculus present, it may fill the whole gall-bladder, and usually corresponds in outline to the form of the latter. The surface of the concretion may be rough or smooth, but the walls of its receptacle generally fit it closely, sometimes sending down processes of mucous membrane into the depressions which here and there furrow its surface. Multiple calculi, by reciprocal attrition and pressure, assume facet shapes and convex and concave surfaces, and thus come to fit perfectly together. Sometimes they present the form of regular tetra- or octa-hedral crystals. In consistence they may be firm or waxy, but are most often brittle, break readily between the fingers, and soon crumble either spontaneously or on slight pressure; I have, however, in my collection, gall-stones passed twelve and thirteen years ago which are still perfectly hard and intact. The material holding the particles together is thought to be cholic or choloidic acid, or both; it has also been supposed to be mucus.

The color is subject to infinite variation; they may be whitish, brownish yellow, brown, green, blackish, mottled, or streaked. They are made up of many strata of different materials, and the differences in color between these various layers are often very great.

The calculi have a nucleus, sometimes multiple, chiefly composed of biliary pigment in combination with lime, traces of mucus, and earthy phosphates. Around this nucleus the materials that constitute the concretion become deposited in regular or uneven strata. A majority of the calculi are composed entirely of cholesterin, with a nucleus of calcareous matter or pigment. Now and then this pigment is more abundant, and is sometimes uniformly distributed throughout the mass; at other times it and cholesterin form alternating layers. In some cases there is no cholesterin at all, and the calculi consist exclusively of carbonate and phosphate of lime.

*Uric acid** has been found in them, and they generally contain traces of iron, manganese, and copper.

The specific gravity is light, and varies with the composition; when chiefly of cholesterin they float in water. Ordinarily they are slightly heavier than this liquid, and sink in it.

There may be fullness of the gall-bladder, and when palpation is practiced the calculi are felt as hard, movable bodies, producing by contact with each other a crackling sound, which may be heard with the stethoscope, and is said to resemble the noise made by tapping upon a bag containing nuts or dry beans.† A large calculus can be accurately made out, as shown by Buckler and others.

Biliary calculi being once formed may remain quiescent within the gall-bladder for an indefinite length of time.

I have never seen a case where the diagnosis could be made under such circumstances, though it is sometimes practicable.‡ In certain cases, however, they do not remain latent, but give rise to disturbances of different kinds.

Ordinarily calculi exist even in large numbers without giving rise to changes in the mucous membrane; at other times they are merely the lesions peculiar to a catarrhal inflammation.‡ In a smaller proportion of cases their presence induces suppurative inflammation, which may terminate in perforation, sometimes into the peritoneum, the stomach, the bowel, portal vein, ureter, or into the pleura; but fortunately it is usu-

*See an interesting case, with illustration, recorded in the *American Practitioner*, February, 1877.

*Stöckhard and Marchand.

† Petit.

‡ Jaccoud, Pathologie Interne.

ally preceded by the formation of adhesions to neighboring organs, and this is especially likely where the opening takes place externally. Such a case came under my observation many years ago through the kindness of the late Doctor Lewis Rogers, who was so justly distinguished in life and so deeply mourned in death. The patient, a woman of middle age, had for a long time suffered from dull, recurrent pains in the region of the gall-bladder. After a while she had sharp, shooting, and then throbbing pains and fever. A swelling appeared, and an abscess formed, which broke externally, and several gall-stones were discharged through the wound. In time the opening closed and the patient recovered.

Chronic inflammation may also be developed, when the walls of the gall-bladder thicken and contract, the liquid contents become condensed by absorption of the water, and the gall-stones become welded together by a chalky mass lying in immediate contact with the contracted gall-bladder.

I have often found biliary calculi at the post-mortem examinations of persons in whom their presence had never been suspected during life, and many persons pass small gall-stones without any pain, especially at Carlsbad and Marienbad while drinking of these justly celebrated mineral waters; yet ordinarily when the gall stones are disturbed and travel along the ducts they give rise in their migrations to the symptoms of hepatic or gall-stone colic.

Calculi within the liver itself are even more likely to remain latent than when they quietly occupy the gall-bladder, but their symptoms are so extremely obscure that a diagnosis can scarcely be based upon them. Ill-defined paroxysmal pains, not radiating, but confined to the right hypochondriac region, absence of jaundice and hepatic enlargements, with perhaps slight digestive derangements, constitute their whole number. When an intra-hepatic calculus in its downward course becomes lodged in the hepatic duct, there is fixed pain, persistent jaundice, with whitish evacuations, and the liver becomes speedily enlarged, but the gall-bladder is not distended —and this is a symptom of diagnostic importance in differentiating between obstruction of the common duct and of the hepatic duct.

It has already been mentioned that calculi may remain for a long time in the gall-bladder without giving rise to irritation, but in certain cases their presence induces *chole-cystitis*, sometimes so slight and superficial as to be unattended by any symptoms, at other times involving the whole thickness of the wall of the gall-bladder and signalized by acute symptoms of great severity; there are then severe pains in the region of the gall-bladder, constant, but with paroxysmal exacerbations during which they radiate to the epigastrium, loins, and right shoulder, and also fever. The neck of the gall-bladder is of necessity implicated in the inflammatory process, and becomes obstructed, hence to the symptoms above related is added distention of the gall-bladder, which gives rise to a pyriform tumor in this region; but there is no jaundice, which is a point of importance as establishing the diagnosis between this condition and obstruction of the common duct.

Chole-cystitis ordinarily terminates in recovery, but may result in perforation and peritonitis, as already mentioned, with the alarming and grave symptoms that accompany that event. An interesting case of chole-cystitis from gall-stones is reported by M. Paulet in *Allgemeine Wiener Medicinische Zeitung*, 1875, as follows:

A woman, aged 42, mother of eight children, began in November 1874 to feel a severe pain in the right side. On examination there was found a somewhat diffuse tumor about the size of a child's head, which extended from the umbilicus to the anterior superior spinous process of the ilium. As the case was attended by fever it was diagnosed as one of suppurative ovaritis. In December it was determined to open the tumor with Vienna paste. In three days the skin was destroyed, and in seven the aponeurosis. An exploratory incision was now made, from which a little fluid escaped, but the needle came in contact with numerous hard bodies, which on removal proved to be gall-stones. Forty of these were then taken out and a large one found almost encapsulated. It was broken, divided, and extracted without much difficulty, and some bile was also discharged. This biliary fistula soon closed, and in March 1875 the patient had entirely recovered.

It is difficult to understand why in some persons gall-stones, even in large numbers,

should remain in the gall-bladder without indicating their presence by any symptoms, and why in other cases they should be so often disturbed from their resting-place and urged along the various passages until finally ejected from the system. Speculation on this point is vain. There seems to be some connection between the inception of an attack of biliary colic and the period of greatest functional activity of the small intestine and neighboring parts consequent upon a full meal. The paroxysm ordinarily begins two or three hours after a meal, and patients are prone to believe that food has disagreed.

When active duodenal contraction on the arrival of the chyme stimulates the gall-bladder to pour forth its contents, the bile thus set in motion engages the calculus in the neck of the gall-bladder. When once entered into the cystic duct, muscular contractions, aided by the *vis a tergo* of the bile, propel the calculus until it has cleared the ductus choledochus and drops into the bowel. It has already been remarked that biliary sand and concretions of larger size may pass without unpleasant symptoms, and even without the knowledge of the patient, but such is not the general rule.

I have noted the symptoms of at least two hundred attacks of gall-stone colic, and though they were subject to great variation as to severity and duration they were also characterized by great uniformity so far as their number and character were concerned. The earliest symptom is usually either shivering or a sense of discomfort and distress in the epigastrium, and this is soon followed by nausea, vomiting, and lastly pain.

The nausea recurs in paroxysms, though it may be unremitting. The matters vomited consist at first of more or less completely digested food, but, continuing after the stomach has been completely emptied, they then consist of bilious, green-looking liquid. When the calculus has reached the common duct the vomiting of this greenish liquid ceases, though the nausea and retching may not have stopped. Bilious vomiting, as suggested by Trousseau, indicates that the common duct is free, and that the calculus is either at the neck of the gall-bladder or in the cystic duct.

The pain is, in most cases, at the commencement of the paroxysm referred to the pit of the stomach, and *not to the liver*. Subsequently it may radiate to the navel or the right shoulder, and become located more distinctly about the lower edge of the liver. The pain varies in character. It is described by patients as burning, cutting, tearing, or boring, or as a sense of painful constriction. It may be light, but is more frequently severe, and in a well marked paroxysm it is excruciating, with remissions and violent exacerbations, which are said sometimes to occur in a regular rhythm.*

Among all painful diseases I have observed, there is none which entails more intense suffering than this, and women have repeatedly told me that they have endured far greater agony in passing a gall-stone than in giving birth to a child. Some of my patients would in vain seek relief by frequent change of posture; others would remain perfectly quiet on their back, finding that every motion aggravated their sufferings.

Sudden and abrupt cessation of the pain, according to my observation, most frequently indicates that the calculus has tumbled back into the gall-bladder after having engaged in the neck. Ordinarily, and especially when the calculus is large and angular, the mucous membrane of the ducts has been bruised and lacerated during its downward passage, and though there is a sudden abatement of the pain when the stone drops into the bowel, yet perfect relief is not attained for some time, and tenderness and soreness continue perhaps for several days. The abdomen is often retracted, and its muscles may sometimes be seen to contract spasmodically.

Jaccoud suggests that the abdominal muscles keep rhythm with the contractions of the gall-bladder, endeavoring to expel the calculus. The face is often pale, and the forehead covered with perspiration; the pupils are dilated; the pulse is often slow, but in many cases, and especially when the paroxysm is severe and has been protracted, it becomes small, quick, and irregular.

The urine is often voided frequently and in large quantities, and is very pale and of low specific gravity during the paroxysm, but after it is over becomes scanty, high-colored,

---

* Jaccoud, *loc. cit.*

contains bile and urates, and is of high specific gravity.

In ordinary hepatic colic there is *no fever*. I have, however, observed two cases in which well marked febrile excitement set in and lasted throughout the paroxysm, then suddenly passed away with the cause. Frerichs reports similar cases in which the temperature rose as high as 104°, but the duration of the fever and that of the paroxysm were exactly the same.

When the paroxysm has lasted for some time, distention of the gall-bladder may become quite perceptible. In my cases this was so rare that I find it recorded only in a case of protracted colic, lasting forty-eight hours, and in another case where the calculus became impacted in the common bile-duct and which terminated in death.

Doctor Hayden* also remarks that the round, smooth, yielding tumor mentioned by authors as formed by the distended gall-bladder is very rarely met with. In some, when tumefaction of the gall-bladder was present, there was also enlargement of the liver; both pass away together as the obstruction is relieved, unless extensive inflammatory action has been excited.

In twenty out of my thirty-five cases jaundice was never present, and among the fifteen cases in which it was observed it was not an invariable concomitant of the colic fits, these patients having many paroxysms from which this symptom was absent. From this it appears that jaundice is not an invariable or necessary part of biliary colic. A calculus descending the cystic duct will not induce it; and even when the common bile-duct is obstructed, jaundice sets in only if the impaction be protracted or the obstruction complete; if the latter, the jaundice is permanent. Such was the case with one of my patients, who died profoundly jaundiced and comatose.

Most frequently the jaundice develops during the twenty-four hours immediately after the cessation of a paroxysm, and is then most likely due to tumefaction of the ducts from engorgement caused by the bruising and laceration of the mucous membrane during the descent of the stone.

Doctor Goodeve* has remarked that in some instances there are convulsive movements of the abdomen. This I did not observe in any of my cases, nor general convulsions or delirium, which are said sometimes to occur in this connection.

The duration of an attack of biliary colic varies from a few hours to many days. I have had patients in whom it lasted forty-eight hours, and Trousseau records one case in which it lasted six months. It appears to be determined by the size and number of calculi passing.

The subsidence of the pain which marks the close of the seizure is often sudden, but in my experience generally not complete. The patient complains of soreness and weakness; there is tenderness over the liver and gall-bladder, and these in proportion to the duration and severity of the attacks. When the attack has been protracted, and when one follows another in rapid succession, I have often noticed steady and marked loss in weight.

One attack of gall-stone colic is, as a rule, the precursor of others. The frequency of their occurrence appears to depend, among other causes, upon the number of gall-stones contained in the gall-bladder, and upon the rapidity with which new ones are formed. In some cases weeks, months, and even years may mark the intervals between the attacks. In other cases these occur within a few days, or even a few hours.

In the latter class there are multiple calculi which migrate in rapid succession, or a single calculus repeatedly engages in the funnel-shaped orifice of the cystic duct, and then falls back into the gall-bladder; or it traverses the narrow cystic duct, and on entering the common duct, which is of larger calibre, the pain greatly abates, and finally it engages the narrow orifice of the latter, when the pain again returns with increased violence, until the calculus at last clears it and drops into the bowel, and the fit is at an end. I have on several occasions been led to the opinion that a calculus having engaged in the orifice of the cystic duct had receded and fallen back into the gall-bladder.

The following points have guided me in

---

* *Dublin Journal of Medical Science*, April, 1876.

* Reynold's System of Medicine, vol. iii, page 315.

these cases: The short duration of the seizure: The sudden cessation of pain: Entire absence of jaundice during and after the paroxysm: Failure to find a calculus in the evacuations, though careful search was continued for two or three days after the fit had ceased.

But in many cases no such minute diagnosis is possible. Indeed the diagnosis of gall-stone colic is often obscure, and the true nature of the disease is not seldom overlooked. An illustrative case occurred not long ago in a Western city, the particulars of which were communicated to me by a medical friend, who performed the post-mortem examination. The gall-bladder was filled with biliary calculi; the common duct was obstructed by a large concretion which had become impacted at its orifice, causing not only inflammation, but obstruction of the duodenum.

Gall-stone colic may be distinguished from ordinary colic by the latter never being associated with jaundice; by the relief afforded by emetics and purgatives; by the pain being located farther down; and by the absence of tenderness and soreness over the liver and gall-bladder.

Renal colic is accompanied with irritation of the urinary organs, the coarse or microscopic appearance of blood in the urine, the course of the pain, retraction of the testicle, passage of gravel per urethram, etc.

In hepatic neuralgia the pain is far less severe. There is apt to be neuralgia in other parts with which it alternates; there is absence of jaundice, no enlargement of the gall-bladder and liver, and no gall-stones are passed. Hepatic neuralgia, besides, is exceedingly rare, and occurs mostly in hysterical women.

Cancer of the pylorus has been mistaken for hepatic colic. I have differentiated them by noting that in the former the pain is more constant, though less severe; there is no jaundice, the liver and gall-bladder are not enlarged, and the tumor, when pressed, is seated higher in the abdomen and nearer the median line than the gall-bladder.

In carcinoma of the liver I have seen jaundice and enlargement of the gall-bladder from pressure of a cancerous nodule on the ducts, but the steadiness of the pain, the nodulated enlargement of the liver, the cachexia, and absence of the paroxysmal elements render the diagnosis easy.

Aneurysm of the abdominal aorta and hepatic artery have been associated with paroxysms of excruciating pain, and jaundice, and even enlargement of the gall-bladder, and in some instances these lesions have been mistaken for gall-stone colic; but aneurysm in this locality is usually recognized without difficulty by attention to its characteristic signs.

The only *positive* sign of gall-stone colic is the finding of the calculus, or fragments of it, or biliary sand, in the evacuations. Careful search for them should, therefore, always be made when their presence is suspected. Every evacuation for several days after the seizure should be kept for investigation.

I generally prescribe a dose of some purgative the day after an attack of biliary colic, most often castor oil, which is indicated on account of the constipation that then commonly exists; and it has besides the effect of hastening the ejection of any calculi that may have found their way into the bowel. The method of search is a matter of some importance. A double thickness of fine mosquito-netting is tied over the top of a slop-bucket, and the fæces softened and diluted by the addition of warm water should then be poured upon the netting. All solids, such as pieces of bone, undigested vegetable matter, or *gall-stones*, are detained, while all the soluble portions filter through. When sought for in this manner, even small calculi cannot escape detection. It is rather tedious and unpleasant work, but it should never be neglected, and rarely entrusted to others. In one case my diagnosis was hotly contested, and its correctness admitted only when, after two days' search, a rather large calculus was found.

If the calculus is large, round, or oval, with uneven surface and single, it is probable that no others remain behind. If, on the contrary, it or they be facet-shaped and polished, the gall-bladder will probably contain more that have not yet passed. The latter is the most common, and among the numerous biliary calculi that I have found, only *one* had the appearance of being solitary.

The complications and sequelæ are some-

times of serious character, and require a somewhat more extended mention than that already incidentally made. In my own cases unfavorable developments were very rare, and my knowledge of them is derived in part from dead-house experience in the hospitals to which I have been attached, and in part from acquaintance with writers on the subject.

The calculi, whether in the liver, gall-bladder, or ducts, may give rise to inflammation, suppuration, and the establishment of internal or external fistula—the former are beyond our reach, but the latter have repeatedly terminated in perfect recovery, as shown by cases quoted in these pages.

Rupture of the ducts or of the gall-bladder, and general and fatal peritonitis, happen occasionally. The literature of chole-lithiasis furnishes a number of instances, but it must be of rare occurrence.

A calculus may become permanently impacted in the ductus choledochus, or this duct may become obliterated from inflammation excited by the passage of a gall-stone. Under such circumstances there is enlargement of the gall-bladder, tumefaction of the liver, with enormous dilatation of the biliary ducts, which may form fluctuating tumors like abscesses. There is persistent jaundice, but sometimes the fæces retain their normal color and the jaundice abates because, under increasing pressure from behind, the bile filters through between the wall of the duct and the impacted concretion.

Gangrene of the duct, followed by sudden death, has occurred (Bretonneau).

Even when the calculus has passed into the intestine, all danger is nòt over. If large it may cause fatal obstruction of the bowel. Such cases have been related by Murchison,* by Cohnheim,† By Jeaffreson.‡ In other cases the calculus has been extracted from the rectum during life; such a one was reported by Doctor Mitchell.‖ If the calculi be small, they may become arrested in the vermiform appendix and cause perforation and fatal peritonitis.§

Doctor Dorkin relates a death from pressure of gall-stones upon the portal vein.*

A tendency to syncope is occasionally observed during the paroxysm, and proved fatal in one case reported by Portal in 1813. Another patient, reported in the *American Journal of the Medical Sciences*, 1866, by Doctor Buckler, of Baltimore, appears to have died from this cause; also a third, death occurring within sixteen hours.†

One of the rarest complications of chole-lithiasis is reported by Trousseau,‡ and consisted in reflex paraplegia, with general hyperæsthesia of the skin, from which, however, the patient finally recovered.

In the majority of cases prognosis is favorable, but the possible occurrence of such grave complications as those just enumerated must not be overlooked. Twenty-two out of thirty-five cases have passed from under my observation, but previously appeared to be permanently relieved; eleven still remain under observation, and in all of these a number of years have elapsed since the last seizure. Two died, as already stated. The length of time required to effect a cure is impossible to foretell; it depends in great measure upon the intelligent and hearty coöperation of the patient. The disease runs no definite course, but may extend over several years.

The therapeutic indications are two-fold, viz.: To relieve the patient during the attack, and: To prevent its recurrence. To accomplish these objects is not always easy, and, as in almost every exigency, there is ample scope for the exercise of sound judgment and nice discrimination in the selection of means and methods appropriate to the particular case in hand.

The agent that in my hands has been most uniformly efficacious for the relief of pain and prevention of shock to the nervous system, is morphia. I have also thought that it tends to shorten the paroxysm, as well as to lessen its severity. It should be administered hypodermatically. I usually give from one-fourth to one-half grain, repeating this every hour or two until the pain is relieved. The earlier in the seizure it is resorted to, the more certain it is to afford speedy relief.

---

* Diseases of Liver.

† *Virchow's Archiv*, 1866.

‡ *British Medical Journal*, May 30th, 1868.

‖ *American Journal of the Medical Sciences*, 1866.

§ Trousseau, Clinical Medicine.

---

* *Medical Times and Gazette*, 1868.

† Leigh, *Medical Times and Gazette*, 1867.

‡ Clinical Medicine.

In a recent article on this subject, Doctor Hayden, of Dublin,* confirms, by his results, the opinion I have expressed about this remedy, and declares that hypodermatic injections of morphine are more efficacious than the inhalations of chloroform.

Opiates should never be given by the mouth or in solid form for the relief of gall-stone colic.

In some cases I have treated, the pains were so atrocious that morphia was inadequate to allay them; the administration of chloroform is then the best alternative. It may be given simply for the relief of pain and to induce such relaxation of the tissues as to thereby facilitate the passage of the gall-stone, and then the best method of using it is by inhalation. But the paroxysm may be so protracted as to make the continued inhalation of chloroform not only inconvenient but absolutely unsafe, and I have more than once been compelled to discontinue its use on such account.

Chloroform is also given internally with the view of causing the rapid solution of the gall-stones *in situ*. Its administration in this way is based on the fact that chloroform is a powerful solvent of cholesterin calculi out of the body, and upon the supposition that it is not changed in the blood and passes from this fluid into the gall-bladder, where its solvent action is exerted upon the contained calculi. One is inclined to reject at once this theory of its action as highly improbable; for it is indeed difficult to believe that a quantity of chloroform sufficient to dissolve these calculi *in situ* can be safely administered to a patient, even if the passage of the volatile liquid into the gall-bladder were at all proved. Doctor Buckler,† of Baltimore, has adhered to this treatment for over twenty years, and declares that he has invariably found it trustworthy and successful. He gave a teaspoonful of chloroform internally every hour while the pain lasted, and a teaspoonful after each meal for five days longer, and saw a large calculus in the gall-bladder melt away under its use, so that at the end of this period the tumor had disappeared. Doctor John Barclay,* Physician to the Infirmary, Leicester, England, gives the same *modus operandi* and entertains the same high opinion of the value of chloroform administered internally in this disease, and declares that he has found it to give invariable and permanent relief in many instances. But his good results were obtained with much smaller doses than those given and advised by Doctor Buckler; two or three drops three or four times a day being all he gave. In my experience these large and frequent doses of chloroform have produced alarming symptoms, and I have never been able to give them with the freedom recommended by Doctor Buckler. The smaller doses I have found utterly without effect.

The general, prolonged hot bath I have sometimes found of signal benefit in producing relaxation and relieving pain, but it is often inconvenient, and perhaps as often impossible of access. Surrounding the patient's waist with a folded sheet wrung out of hot water will sometimes give relief; and in several instances I found the application of leeches speedily effectual when everything else had failed.

Jaccoud states that general blood-letting has in several cases been followed by sudden cessation of spasm of the ducts and subsidence of the attack.

Emetics are often resorted to by the patient himself on account of the nausea and retching, which induce him to believe that if he could only vomit freely, the pain as well as the nausea would cease. But emetics ought to be rigorously proscribed, for if they do favor the progress of the gall-stone by provoking more powerful contraction, they are also likely to produce rupture of the ducts.

When the paroxysm is over, I believe the administration of a purgative, such as castor oil, is advisable and hastens the ejection of the gall-stone.

In order to prevent the recurrence of the paroxysms, at least two conditions must be fulfilled: Any gall-stones remaining in the gall-bladder must be dissolved: Formation of new concretions must be prevented.

The well known solvent power of ethers

---

* *Dublin Journal of Medical Science*, April, 1876.

† *American Journal of the Medical Sciences*, July, 1867. [See also MEDICAL AGE, April 10th, 1894 (vol. xii), page 199.—ED.]

* *British Medical Journal*, 1870.

upon cholesterin was supposed to be active within as well as out of the gall-bladder. Upon this principle the treatment for gall-stones by means of Durande's remedy was based. Trousseau, while rejecting the theory, accepted the remedy, which is composed of sulphuric ether three drachms, turpentine two drachms; dose, two teaspoonfuls in the morning, and gradually increased until about a pound of the mixture has been taken in all. At present this medicine is little used on account of its disagreeable taste, which soon becomes loathsome to the patient; I have never prescribed it.

Success in preventing future paroxysms must depend upon our ability to arrest the formation of new concretions and to facilitate the expulsion of those already formed.

So long as gall-stones remain in the gall-bladder the liability to future paroxysms of colic continues, and this must be clearly explained to the patients. When our efforts are adequately seconded by the patient, a cure can generally be effected so that no new gall-stones will be formed.

The patient's food should be plain but nourishing. Highly seasoned viands, malt liquors, fats, sweets and rich soups must be interdicted. He should eat moderately, at short intervals—not less than three meals a day. He should take active exercise, by walking; all other exercise is inferior to this. So long as any calculi remain in the gall-bladder he should not indulge in violent exertions, such as running, wrestling, etc. His daily life must be regulated with the view of establishing rapid and perfect tissue change, perfect combustion and complete and speedy elimination.

Doctor Buckler, in the paper already mentioned, suggests that any remedy capable of preventing the formation of gall-stones must be a highly oxygenated compound, and further states that the difficulty of dissolving cholesterin by any other substance than ether or chloroform grows out of the fact that cholesterin contains a very small amount of oxygen, from 1½ to 2 per cent., which is less than that of almost any other substance. He proposed succinic acid and peroxide of iron on account of the large amount of oxygen contained in both of them. I have used this preparation of succinate of peroxide of iron, and in almost every case with complete success. It should be taken for six months continuously at least.*

It has also been my practice to put the patients upon a course of Carlsbad water; Vichy or Marienbad waters have also been used with benefit. Artificial mineral waters of good quality I have often prescribed with excellent results. It is difficult to say how they act. At Carlsbad, patients who drink the waters often begin without pain to pass gall-stones, whose existence they had never suspected.

As insufficient alkalinity of the bile, and the prolonged stay in the gall-bladder of that fluid, favor the formation of gall-stones, it is possible that these alkaline waters become remedial by provoking a more active and abundant percolation of highly attenuated and hyper-alkaline bile, which will prevent the deposition of bile-pigment and the formation of calculi.

The action of these waters upon catarrhal states of the mucous membranes may also have a share in their good effects in this disease, which so frequently depends upon catarrh of the gall-bladder. Whatever their *modus operandi* may be, their curative value is undisputed.

In my earlier cases I relied upon a remedy that was employed with much advantage by the late distinguished Doctor Lewis Rogers, of this city:

℞ Ammonium hydrochlorate, 4 drachms.
Extract taraxacum, 4 drachms.
Water, 6 ounces.

A dessertspoonful three times daily.

A few years ago Schiff, of Germany, suggested that gall-stones are formed of cholesterin, not because this substance is formed in too great abundance, but because the bile is deficient in principles which maintain it in solution; these are soda and potash salts of cholic and choleic acid. Schiff therefore recommended that eight grains of choleate of soda be given twice daily, and increased unto *saturation*, as indicated by irregularity of the pulse, which becomes slow during re-

*Messrs. Parke, Davis & Co. now prepare an elixir of the hydrated succinate of peroxide of iron, the dose of which is one drachm three times daily, after each meal.—Ed.

pose and accelerated by the least effort. The dose may then be diminished, but not entirely suspended. It should be kept up at least a week to produce amelioration of leading symptoms.

Doctor Dabney, of Virginia, has published cases fully bearing out the previous dicta of Schiff. On one occasion I procured some capsules of cholate of soda for a patient, but it so soon gave rise to gastric disturbance that I was glad to return to the use of succinate of the peroxide of iron with Carlsbad water.

Louisville, Kentucky.

BILIOUS REMITTENT FEVER OF THE TROPICS.

BY DOCTOR JOAO VINCENTE TORRES HOMEM.*

(*Continued from page 328.*)

Case 1.—José Carrazedo, Spaniard, 33 years of age, bilious-sanguine temperament, employé of a bakery, eleven years resident in Brazil, entered Mizericordia Hospital May 7th, 1867. Suffered from intermittent fever during two months in 1866; is subject to superficial lymphatitis (commonly called white erysipelas), and abuses alcoholic stimulants. Having gone about a good deal on the 5th, taking bread to various customers, he returned home indisposed, with wandering pains in the legs and headache. At 3 P.M. dined with but little appetite, and immediately after went out again to his ordinary business. At 8 P.M. had a severe chill and vomiting, rejecting all the food taken at dinner; fever set in, and he was very restless till next morning. He took a purgative of castor oil, which produced four large evacuations, and abstained entirely from food. The fever, which had lessened, increased during the afternoon and night of the 6th, and next day at seven o'clock the patient came to the hospital.

His face was flushed; sub-jaundice of sclerotic conjunctiva and entire skin, especially neck and thorax; slight headache; no delirium; pulse 98 and full; peripheral heat a little increased; tongue covered with a thick coat of yellow fur; thirst; anorexia; nausea and vomiting after swallowing a large quantity of water—the vomited matter being an inodorous greenish fluid; slight diarrhœa; belly tender on palpation, especially in epigastrium and hypochondria; liver enlarged; spleen a little larger than normal; urine very high-colored, scanty, and without albumen; respiratory organs entirely sound.

Immediately ordered six wet cups to hepatic region; one gramme of calomel in three doses, at two hours' interval; an ounce and a-quarter of castor oil, to be taken two hours after last dose of calomel; one gramme quinine muriate, to be taken immediately after purging, and sixty centigrammes for the next morning.

May 8th. Patient completely jaundiced. Bore calomel well, but vomited castor oil and the two doses of quinine; had three copious bilious stools; whenever he drinks water, even in small amount, vomits a few moments later. Tongue remains much coated, yellow color of fur deeper; temperature of skin above normal; some perspiration on neck and chest; pulse 96; liver and spleen unchanged since yesterday; urine exhibits a large amount of bile pigment. No symptom as regards the nervous system, with the exception of some prostration of strength. Prescribed five centigrammes of tartar emetic in 250 grammes of infusion of ipecac, half a wineglassful every half-hour; orangeade *ab libitum* after operation of emetic; one gramme quinine in two doses—one at six o'clock, the other at nine the next morning.

May 9th. Jaundice more pronounced. The emetic had acted freely—patient vomited eleven times and had six bilious stools; no longer any vomiting. The two doses of quinine, given in solution with acid lemonade, were well borne; tongue clearer; temperature still high; skin covered with some sweat on forehead, neck, and trunk; pulse 96, less full. The night before the patient had some shivering, and a few hours afterwards felt worse. The interne found him at five o'clock with high fever, intense headache, and great thirst, and ordered orangeade continued, and two sinapisms applied to calves of legs. Liver in same condition; spleen more enlarged; urine very bilious. Ordered one gramme more of quinine in two doses—one to be taken at noon, the other at 3 P.M.; decoction of barley and *herva tustao*,* with two grammes of nitrate of potash, eight grammes of soluble cream of tartar, and forty-five grammes of syrup of asparagus-tips—a wineglassful every two hours; continued the orangeade.

May 10th. Patient's condition much the same. No vomiting, but has had diarrhœa; jaundice very intense and generalized; tongue

*Translated by Surgeon Geo. P. Bradley, U. S. Navy.

**Herva Tustao*, or *Tangaraca—Boerhaavia hirsuta*, Lin.: diuretic and deobstruent.—TRANSLATOR.

less furred, but very dry; temperature less high, but not normal; pulse 92; forehead, neck and chest bathed in perspiration. The evening before, from five to six o'clock, appeared the same shivering-fits, followed by exacerbation of the fever. Liver somewhat reduced in size; spleen unchanged; urine, besides bile-pigment in large amount, contains albumen, verified by means both of heat and nitric acid. Ordered diuretic decoction suspended, but orangeade to be continued; also:

℞ Quinine, 2 grammes.
Gummy extract opium, 5 centigrammes.
Syrup orange-peel, 30 grammes.
Water, 120 grammes.

A tablespoonful every hour.

May 11th. Little fever; patient covered with sweat; pulse 86. No chills the night before, and the febrile exacerbation was not great, though subdelirium appeared before morning. Some disturbance of intellect perceptible, especially on questioning; some tremor in the upper limbs. At 7 A.M. slight epistaxis, which yielded spontaneously; evacuations lessened, but the belly still a little tympanitic; liver and spleen both less enlarged; urine very bilious, with a larger amount of albumen; deafness and the acoustic disturbance produced by the salts of quinine. Ordered the quinine suspended; blisters to calves of legs; orangeade continued; two mutton broths; also:

℞ Ammonia carbonate, 1 gramme.
Sulphuric ether, 2 grammes.
Tincture hyoscyamus, 2 grammes.
Diacodium syrup, 30 grammes.

One tablespoonful every hour.

The patient continued under this treatment till the 14th, when the fever was moderate in the afternoon and hardly perceptible in the morning. Delirium continued to appear during the night, and afterwards was manifest also by day. The dryness of the tongue persisted; the stools were bilious, and few in number; the pulse varied between 82 and 86. Ordered two tablespoonfuls of port wine every two hours, alternated with mixture; orangeade continued; meat broth; eight grammes of asafœtida in 300 grammes of infusion of chamomile for two enemas at six hours' interval; also:

℞ Soft extract cinchona, 4 grammes.
Tincture canella, 4 grammes.
Tincture musk, 4 grammes.
Syrup orange-peel, 30 grammes.
Valerian water, 150 grammes.

Two tablespoonfuls every two hours.

Under this treatment, regularly followed to the night of May 19th, the patient went on gradually improving. The delirium, tremor of upper limbs, and dryness of tongue diminished; the adynamia which accompanied these grave symptoms was also yielding.

May 20th. Patient's face lively; response to questions clear and prompt; is aware of his improvement; says he has appetite, and asks for better diet. Peripheral temperature normal; pulse 80 and weak. Tongue moist and large, barely covered at base with a slight coat of yellowish fur; belly soft and painless; liver still enlarged, especially at lower border; spleen a little larger than normal; two bilious stools in twenty-four hours; urine very abundant, loaded with bile-pigment and without albumen; jaundiced color of skin and sclerotics remains the same; great itching in several parts of body. Ordered port wine continued; a bottle of natural Vichy water daily; two rice broths, one boiled egg. Suspended all previous treatment.

May 22d, patient had stewed chicken for diet. He was gradually given more nutritious diet, and was discharged on the 30th, retaining as the only vestige of his dangerous illness the yellow color of the skin proper to jaundice.

In June, 1868, this patient again entered the hospital to be treated for an acute bronchitis, and presented no symptom of the bilious fever which had attacked him the year before.

Case 2.—José Luciano Guimaraes, Portuguese, 28 years old, tailor, four years resident in Brazil, entered Mizericordia Hospital March 17th, 1870. Had variola in 1866, and always since enjoyed perfect health, leading a very regular life. After a walk in the Botanical Garden, exposed to the sun for several hours, and while very sweaty and tired, he drank a glass of iced beer. Felt nothing during the rest of day or night, but on rising the next morning perceived that he was not fit for work, had heaviness of head, weakness of the limbs, and bitter taste in the mouth; he, however, left his house in the Rua dos Invalidos, arriving at his shop in the Rua do Hospicio very weary and with headache. Took no breakfast, and at eleven o'clock had some shivering, followed by great heat of face. Returned to his room in a carriage at 2 P.M.; took a sudorific drink, which did not afford the slightest relief. At night had high fever and vomited once. A physician who saw him next day prescribed an antimonial mixture, under which he improved considerably; but later on he again began to feel very ill and had a severe chill. Came to the hospital at 11 A.M., when the physician

on duty ordered sixty grammes of castor oil, and later one gramme of quinine.

March 18th. Patient presents well marked and general jaundice; expression stupid; prostration of strength. Had delirium the afternoon and night before. The purgative produced many evacuations; quinine was retained. Axillary temperature 103.3°; pulse 112, slightly fuller; tongue covered with yellow fur and dry at tip; no vomiting; liver enlarged; spleen normal; urine high-colored, scanty, and free from albumen or bile-pigment. Answers with difficulty, but coherently.

Ordered given *ad libitum*, decoction of broom and *gramma** strongly acidulated with lime-juice, and sweetened with syrup of tamarind; also:

℞ Bisulphate quinine, 2 grammes.
Soft extract cinchona, 4 grammes.
Diacodium syrup, 30 grammes.
Water, 120 grammes.

M. One tablespoonful every hour.

March 19th. Patient in a pronounced state of adynamia and delirious. The night before the axillary temperature reached 104.5°, and pulse 120. At 9 A.M. this morning temperature was 101.8° and pulse 100. Very intense yellow color of skin and sclerotics; tongue dry, red at tip, and covered with yellow fur at base; frequent vomiting—vomited matter of dark green color. Acute pain in epigastrium and hepatic region; liver enlarged; spleen of normal size; moderate bilious diarrhœa; urine very bilious and free from albumen. Prescribed a bottle of Murray's liquid magnesia, one tablespoonful every hour; iced lime-lemonade as beverage; ointment of camphorated belladonna to anoint gastro-hepatic region; likewise two grammes of quinine and one gramme of Sydenham's laudanum in 180 grammes of albuminized water, for three enemas—one every two hours.

March 20th. Vomiting; continued subdelirium; teeth covered with sordes; adynamia progressing. Examination of matter ejected by vomiting reveals a certain amount of black and altered blood mingled with the bile, confirmed by microscopical examination. The other symptoms remain the same. The auditory phenomena due to quinine are manifest. Continued the quinine enemas; ordered a blister four inches square to the epigastrium; iced lemonade and small bits of ice; also five centigrammes of morphine sulphate and fifteen minims of tincture of nux vomica, in a bottle of Murray's magnesia — a tablespoonful every hour.

March 21st. Patient vomited twice—the first time he expelled a small amount of blood (about a teaspoonful) mixed with mucus and bile; the second time the vomited matter was exclusively bilious. Axillary temperature 101°; pulse 88; face more flushed; tongue coated, but more moist and less red; liver less enlarged, right hypochondrium painless; spleen normal. Two bilious evacuations. Urine very rich in bile-pigment but free from albumen; jaundice very marked. The previous evening there still was delirium, and at 5 P.M. he had a temperature of 102.6°, pulse 96. Ordered Murray's magnesia with morphine and nux vomica continued, also the ice, iced lemonade, and quinine enemas.

March 22d. No vomiting whatever. General condition more satisfactory; responses tardy, but coherent; some adynamia; temperature 100.4°; pulse 80; tongue still coated, moist, and red at tip. Patient had no stool for twenty-four hours. Abdomen a little swollen; the jaundice still persists; very manifest deafness—complains of great buzzing in ears and head (cinchonism). The temperature the night before barely reached 101.5°, with a pulse of 92. Ordered decoction of barley and *herva tustao*, with eight grammes soluble cream of tartar and thirty grammes syrup of tamarinds; lime lemonade, not iced; chicken broth three times a day.

The patient remained under this treatment till the 25th, improving gradually and progressively. On the 26th a certain degree of adynamia was still observed, along with much general jaundice and lack of appetite; temperature 99.6°; pulse 80. Ordered eight grammes of soft extract cinchona in 150 grammes of water, two tablespoonfuls every two hours alternately with a tablespoonful every two hours of strong port wine; also a bottle of natural Vichy water; two mutton broths; one rice soup.

On the 29th, appetite having appeared, the patient was ordered chicken stew and two soups. On April 1st he was fully convalescent, and was given a nutritious diet; on the 6th he was discharged, jaundice still persisting.

Case 3.—Manuel Pinheiro da Costa, Portuguese, aged 56, for twenty-two years a resident in the city of Pilar, cachectic and subject to attacks of intermittent fever, entered the hospital on March 14th, 1871. Having come to town on the 10th on business, he was much exposed to the sun on the 11th, and at night felt greatly fatigued, though he had neither fever or headache. On the morning of the 12th he was awakened by a severe

* Gramma—*Triticum repens*, sometimes *Panicum dactylon*.

chill, which lasted two hours and was followed by fever. Supposing it a case of intermittent fever, he took one scruple of sulphate of quinine in half a cup of very hot coffee, as he had been accustomed to do at Pilar. Felt very ill on the 13th; vomited, was greatly prostrated, and continued to be feverish; took another dose of sulphate of quinine, equal to the first and in the same manner, without any improvement. On the morning of the 14th was a little jaundiced, with great pain in hepatic region; came to the Mizericordia Hospital at 2 P.M., when the physician on duty prescribed six wet cups to right hypochondrium, six decigrammes of calomel, and sixty grammes of castor oil.

March 15th. Patient presents all the external appearances of malarial cachexia and jaundice; skin of dirty yellow color in some parts, greenish yellow in others, in others again light yellow; temperature 103.4°; pulse 120; tongue dry and covered with a very thick coating of yellow fur; bilious vomiting from time to time; constant nausea; bitter taste in mouth; complete anorexia and great thirst. Belly tympanitic, prominent, and painful, especially in gastro-hepatic region; palpation and percussion, even gently made on these parts, force the patient to groan. Liver enormously enlarged, extending six inches beyond the right costal border, invading limits of left hypochondrium, and rising to the level of the fourth rib; spleen enlarged. The calomel and castor oil had produced five large bilious stools. Urine loaded with bile pigment but free from albumen. Cough; dyspnœa; confluent subcrepitant râles at base of both lungs; loud bellows-murmur at base of præcordial region, with first sound of heart; prostration of strength; dullness of intellect; tendency to drowsiness. Prescribed half a wineglass every half-hour of a mixture of tartar emetic five centigrammes, in 250 grammes of infusion of ipecac; also two grammes of quinine divided into three doses—one every two hours in acid lemonade; blisters to calves of legs.

March 16th. Adynamia very marked; jaundiced; expression despondent; some subdelirium; frequent bilious vomiting. The doses of quinine were all rejected. Tongue very dry and more coated; hepatic region prominent and painful, the liver being much enlarged; diarrhœa; belly tympanitic; temperature 103.6°; pulse 124. The night before the temperature reached 104.8°, with a pulse of 128. Urine blackish, bloody, forming in the bottom of the vessel a deposit of a dark red substance (hæmaturia). Symptoms as regards respiratory organs unchanged. Ordered three enemas—one every two hours —each to contain sixty centigrammes of quinine; orangeade as a beverage; six more wet cups to right hypochondrium; also:

℞ Tincture of musk, 2 grammes.
Tincture of chamomile, 2 grammes.
Sulphuric ether, 4 grammes.
Syrup orange-peel, 30 grammes.
Strong decoction cinchona, 150 grammes.

A tablespoonful every hour.

March 17th. Subdelirium alternating with stupor; carphologia; subsultus tendinum; vomit bloody; stools black, composed of altered blood mingled with bile; tongue dry and retracted; teeth covered with sordes; liver very painful on palpation; jaundice at maximum of intensity; well marked hæmaturia; temperature 104.2°; pulse 132—the night before the thermometer indicated 105.5°. Subcrepitant râles over great extent of both lungs. Ordered 250 grammes decoction of cinchona for two enemas; likewise:

℞ Ergotin, 4 grammes.
Sulphuric acid, 20 drops.
Diacodium syrup, 30 grammes.
Valerian water, 150 grammes.

Two tablespoonfuls every half-hour.

At 4 P.M. the upper and lower extremities grew cold and were covered with clammy sweat; two hours later coma supervened and the temperature fell to 97.5°. The patient died at 9 P.M.

No autopsy was made, as the body was claimed.

Case 4.—Mrs. D. F——, Brazilian, 42 years of age, still very regular, from the country but temporarily residing in the city, was attacked on February 3d, 1872, at 8 P.M., by typical symptoms of indigestion, which caused her no surprise, as, contrary to her habit, she had over-indulged in certain articles of food at dinner. She passed a restless night, unable to sleep, and awoke with fever and very intense headache. Was given a diaphoretic ptisan, which had little effect, and afterwards a purgative of castor oil, which produced several evacuations. On the 5th, 6th and 7th she took several doses of quinine in pill form, some of the pills being rejected by vomiting. On the 8th at 11 A.M. I for the first time saw her in consultation, becoming afterwards one of the attendants.

February 8th. Very pronounced jaundice in upper part of trunk, neck, and sclerotics, elsewhere slight; adynamia; expression confused and uncertain; delirium with great restlessness; moves her head and arms constantly from one side to the other; temperature 103.6°; pulse 112; tongue dry, tremulous, and covered with yellowish fur—patient

protrudes it only very imperfectly; great sensitiveness in hepatic region; liver enlarged; spleen normal as to size; abdomen tympanitic; bilious diarrhœa; urine resembles a strong infusion of coffee, and is evidently bloody. An antispasmodic mixture containing musk and carbonate of ammonia* was prescribed; iced cajuada† as beverage; blisters to calves of legs; and two chicken broths with rich wine.

February 9th, 7 A.M. Temperature 99°; clammy perspiration on forehead and neck; pulse small and very feeble; continued delirium—the patient uttering in a low tone a string of unfinished and incomprehensible sentences, now and then interrupted by a deep sigh or a hiccough; eyes half-closed, and not the least attention paid to what is going on in the ward; no response to questions, evidently no comprehension of them. The night before at eight o'clock the thermometer indicated 104.8°. Tongue cannot be examined. The urine is at times passed in bed, and leaves a greenish-yellow spot on the sheets; abdomen very tympanitic; examination of hepatic region excites facial contractions indicative of pain; vomiting entirely absent.

At 4 P.M. the patient was comatose with cold extremities. Her husband told me that at half-past eleven in the morning a flow of blood appeared from the vagina, which still continued very profuse; the blood was black and very diffluent. The patient died two hours after my visit.

Case 5. — José Bento Maceió, Brazilian, muleteer, entered the Mizericordia August 1st, 1873. Had intermittent fever at various times, but presented no signs of cachexia when admitted to the hospital; enjoyed good health from 1870 up to the present time. On the 30th of July fever appeared, preceded by chill and attended by headache and nausea. In spite of domestic remedies, his indisposition continued on the 31st, and for this reason he came the following day to the hospital. The physician on duty prescribed an emetic mixture and one gramme of quinine.

August 2d. Face flushed; very intense headache; eyes injected and shining; temperature 103.4° (the night before, after taking the emetic, it had been 102.6°); pulse 92; tongue coated with yellow fur; anorexia; no vomiting; hepatic region painful; liver and spleen enlarged; bowels constipated; urine scanty, high-colored, but free from albumen; respiratory and nervous systems normal. Ten leeches were ordered to anus; six wet cups to the hepatic region; one gramme of calomel in two doses, to be followed after its operation by one gramme of quinine.

August 3d. Improvement as regards condition of head, but vomiting appears as soon as quinine is taken, and the swallowing of water, no matter how small the amount, constantly excites it. Slight sub-jaundiced color of conjunctiva and naso-labial folds; tongue more coated but moist. Two evacuations. Liver and spleen in same condition; temperature 102.8° (the night before, 103.6°); pulse 92; mental faculties sound. Ordered Murray's magnesia in spoonful doses; a purgative enema, action to be followed by three small enemas of quinine of one gramme each; orangeade as beverage.

August 4th. Vomiting persists; jaundice increased; temperature 103.4° (the night before, 104°); pulse 98; urine bilious. The first enema of quinine was almost immediately expelled. No cinchonism. Ordered a sinapism to the epigastrium; orangeade strongly acidulated; a mixture containing four grammes of elixir paregoric, two grammes of chamomile, and fifteen minims of tincture of nux vomica; enemas of quinine continued, adding to each eight drops of laudanum, but first preceded by a purgative enema.

August 5th. No vomiting, but diarrhœa; jaundice more pronounced and generalized; tongue a little dry at tip, and still coated; temperature 103.2° (last night, 104°); pulse 98; liver and spleen enlarged; urine very rich in bile-pigment; symptoms of cinchonism, but slight. Treatment continued.

August 6th. Jaundice more marked; epistaxis; subdelirium; insomnia; temperature 104.6° (night before, 104.8°); pulse 120; tongue very dry; adynamia; no vomiting; diarrhœa disappeared. Prescribed a mixture containing musk, hyoscyamus, and canella; enema of valerian, asafœtida, and electuary of senna; orangeade strongly acidulated; blisters to calves of legs; meat broth with rich wine.

August 7th. Reappearance of epistaxis; the same nervous symptoms continue; delirium more marked; tremor of upper limbs; two evacuations; urine dark, but free from blood and albumen; great prostration of strength; temperature 104° (night before, 104.8°); pulse 110. Same treatment.

August 8th. The patient, besides the symptoms of the previous day which persist, presents an alarming dyspnœa, inexplicable by any material lesion of the respiratory or

*In private practice it is impossible to take minute note of prescriptions.

†The fruit of a species of Spondias, refrigerant and diluent in character.

circulatory organs; temperature 102.6° (night before, 104°); epistaxis less profuse. Prescribed a strong decoction containing cinchona, sulphuric acid, and syrup of orange-peel, a tablespoonful every two hours; mixture containing ether, castor oil, and canella, alternated with the other; meat broth with wine.

August 9th. Disappearance of dyspnœa; epistaxis very profuse; subdelirium; urine bloody; temperature 100.4° (night before, 102.6°); pulse very weak, 120; adynamia. Ordered a mixture containing standard solution of perchloride of iron, two grammes; tablespoonful doses of good wine; two enemas containing asafœtida, castor oil, and cinchona; mixture of tannin and powdered resin, applied to nasal fossæ; mutton broth; half a cup of coffee.

August 10th. Epistaxis has entirely ceased; hæmaturia increased. Patient answers questions more clearly, but there still is some subdelirium; tongue moist and coated; slight sordes on teeth. Two bilious stools. Liver enlarged, but less painful; temperature 100.8° (the night before, 101.5°); pulse 120. Same treatment.

August 12th the mixture for use in nasal fossæ was suspended. On the 13th there was no longer any delirium, but the urine continued bloody.

August 14th. More color in face; intelligence perfect; still great prostration; jaundice very marked; tongue moist, slightly coated; liver still enlarged; spleen normal; bowels open; urine very copious, but thick and loaded with bile-pigment, though free from blood and albumen; temperature 99.6°; pulse 108. Ordered four grammes powdered calisaya bark in coffee; two mutton broths, with wine, and one soup; *Agua de Inglaterra*, half a wineglass every two hours.

This treatment was continued until the 29th, gradually increasing the diet. On the 30th the patient, still weak and jaundiced, but fully convalescent, and with a good appetite, was taken by his brother to Rio Comprido.

The next case, the importance of which consists merely in the variety and gravity of the nervous symptoms which appeared four days after the jaundice, remains incomplete for lack of autopsy. In hospitals it is very difficult, if not impossible, to have recourse to this source of truth and instruction, if the patient is in a private room.

Case 6.—Agastinho Ornellas, Portuguese, 49 years old, residing in Villa Nova, subject to intermittent fevers, entered the Hospital of Nossa Senhora d'Ajuda January 12th, 1872, in a very grave condition. He arrived in the city on December 23d, 1871, and his disease began the afternoon of January 5th with severe chill and headache. Had fever constantly, and very frequent vomiting and diarrhœa. On the 8th he became jaundiced, and on the 10th commenced to be delirious. Had taken large doses of quinine before coming under observation, and had the mark of a blister in hepatic region.

January 12th, at 11 A.M., he exhibited profound adynamia, continued subdelirium, very intense and generalized jaundice, carphologia, and subsultus tendinum. There was great heat in the frontal region and chest, but a lowering of temperature in the extremities; axillary temperature 101.5°; pulse 132, very small and hard; tongue tremulous, dry, and retracted; great sensitiveness in gastro-hepatic region; liver extraordinarily enlarged, reaching the umbilicus below; spleen enlarged; bilious diarrhœa; paralysis of the bladder; the urine, drawn off with a catheter, was blackish, fœtid, very much loaded with bile-pigment and albumen; very pronounced dyspnœa, but no cough; fine subcrepitant râles at base of both lungs. Medication with diffusible stimulants and antispasmodics, employed carefully and energetically, produced not the slightest effect.

At 7 P.M. the patient was seized with epileptiform convulsions which lasted till 8.30, when his extremities became algid. Coma supervened at 10 P.M., and death occurred at midnight.

Rio de Janeiro, Brazil.

SYPHILIS.*

BY J. M. HALLY, M.D.

This is a topic in which all honorable members of the profession should evince more lively interest than is common at the present day. It may be asserted without fear of contradiction, that the average practitioner gives but little time or thought to the proper treatment of this malady; though why, it is difficult to say.

It will be of no avail to importune representatives of the law and legislative bodies to enact measures that shall prohibit knaves, charlatans and other cormorants from enriching themselves by preying upon the gullibility of the public, if the medical profession

*Read before the Medical Society of Denver, Colorado.

is unable to prove to the masses that, in the treatment of diseases wherein quacks claim to specialize, honest practitioners are at least their equals (to say nothing of being their superiors). How often glaring advertisements announce sure relief to cases that have "puzzled the doctors." "The doctors did not know what was the matter with me," or, "After spending a little fortune in vain attempts to get relief from many of the most eminent men in the medical profession, 'Gun Wa' (or 'Lee Wing' or 'Gee Wo') cured me entirely in three or six weeks," are common "catches." This would not be so if all or even a majority of medical men would be true to themselves and to the profession in which they have the honor of membership. And it is with the hope of stimulating some interest in this subject that I offer this brief paper.

It is superfluous to enter on a detailed or lengthy description of the disease, or to dwell upon the active stage of syphilis, the conditions of the initial lesion, or the pathological phenomena connected therewith. It is sufficient to merely outline the generally accepted idea. The writings of such men as Taylor, Bumstead, Otis, Diday, Vidal, Ricord and Lee are replete with clear and exhaustive descriptions and explanations, and he who follows these will have no trouble in understanding and diagnosing the disease.

All physicians recognize the fact that the introduction and multiplication of disease germs in the human system is the leading feature of that part of the disease aptly named the active stage; and there is no question as to how these germs find access to the system, the accepted theory, or rather the well established fact, being that it is by inoculation.

Many are led to believe that if syphilis is "once in the system," there is very little if any hope of ever regaining the state of bodily and mental health previously possessed. It is generally held by those most conversant with the malady that, instead of the so-called tertiary form being *a stage*, it is merely the sequel of the active form; that the much-dreaded virus has ceased to exist, and consequently this period is one of non-contagion. But a sequel obtaining after subsidence of the active period should not be regarded as constituting a specific stage, since such may be manifest or may not.—After scarlatina there may arise a dropsical condition, but such can hardly be deemed another stage of the malady proper. It would be well if all physicians informed themselves carefully regarding the various sequelæ, their diagnoses and differentiations, so as to be able to treat them when found, or assure their trusting and often terror-stricken patients that they mean little, if anything. It is mainly through the advantage held forth in reference to these often groundless fears that quacks and charlatans prosper.

So long as the profession is unable to satisfy the public that it is qualified to grapple successfully with this malady in all its forms, and under every condition whatever, and wherever and whenever encountered, so long will quackery abound, and legislation against it be *nil*. Experience has proven that many of the so-called sequelæ of syphilis might rather be regarded as the result of treatment than as the consequence of a specific virus; and to regard these symptoms as requiring powerful anti-syphilitic remedies in large doses—as if some obnoxious intruder were to be routed from the system—is, to say the least, injudicious.

The danger, then, is from the reaction against the agents employed in these instances improperly. How often is found inflammation of the throat, nose, mouth, and other mucous membranes, as a result of a too vigorous treatment with mercurials during the active stage! Mercury is a recognized antidote to syphilitic virus, yet it is too frequently carried to a point beyond any necessity, often to absolute injury. The nice point to determine is, just when the virus has been neutralized and when the remedy should be given up; and from neglect or inability in this direction pathological processes both local and constitutional are induced. No one will venture to question the beneficial effects of iodide of potassium properly employed, but a cachectic condition is frequently induced by this drug owing to diminution of fibrin, coupled with excessive waste and resultant tissue metamorphosis; many of the catarrhal maladies from which syphilitic patients suffer are merely the effects of pushing this valuable alterative too far.

If choice were made of alteratives, the verdict could be given, with profit, in favor of those of vegetable origin, as against mercurials and iodides, in this condition or phase of the trouble. Some authors insist that the improvement of the patient under anti-syphilitic medication is indicative of the disease being syphilitic, and therefore anti-syphilitics should be pushed; others, again, contend that this class of remedies should be used sparingly, while the vegetable remedies should be substituted, and those that are tonic in their character preferred, as the metamorphosis should be constructive rather than destructive in the majority of instances. I have long opposed the use of mercury and iodide of potassium in the treatment of patients who are suffering from sympathetic sequelæ or the tertiary stage of syphilis, and am satisfied by experience that my disfavor is well founded; that, on the other hand, drugs of vegetable origin, and the tissue remedies of Schüssler, have given both my patients and myself ample satisfaction, with regard to pleasantness and to rapidity of action. I venture to offer the following as corroborative:

Case 1.—Mrs. P——, aged 39, married, mother of four children, the youngest five years old; complained of a hard lump in the left breast, also of another in the right gluteal region, and a third on the inner aspect of the thigh. All were nearly subcutaneous, rising very little above the general surface of the surrounding parts; hard, firm, and cartilaginous to the touch, and slightly painful on deep pressure; the one in the breast was the largest and most sensitive. Examination of the mouth and throat failed to reveal anything abnormal, but questioning elicited enough to warrant the conclusion that the case was one of gummatous syphiloderm. She was pale, cachectic, and very much alarmed regarding the tumor in her breast, being almost convinced it was cancerous and removable only by the knife. An assurance was given that such was not the case, and treatment began with fluoride of calcium and potassium muriate alternately. Phytolacca was also given as a recurrent remedy, and vegetable tonics as indicated. The patient was dismissed two months later, no sign of the tumors remaining.

Case 2.—R. H——, dry-goods clerk, aged 27; blonde, slightly built, pale and sickly. Ten years previous he contracted syphilis, but had considered himself well for nearly five years, no lesion of a syphilitic nature being observed. For some time he had been troubled with very persistent headache, and fleeting, lancinating pains of a neuralgic type, worse at night; also with pain in the region of the liver. Was excessively nervous, and suffered from paroxysms of vertigo with *muscæ volitantes;* possessed a capricious appetite—sometimes voracious, sometimes almost lacking. Examination revealed hypertrophy of spleen, with much hepatic and gastric tenderness. His urine was of low specific gravity; pulse feeble; respiration slow and at times labored. From the peculiar color of his skin, the fact that his headache and other troubles were worse at night, and that his nervous system was so depressed, and in consideration of his having once suffered from syphilis, combined with the evidences manifested, I concluded that he was a victim of specific tertiary sequelæ, and accordingly ordered him fluid extract caroba leaves, alternated with a mixture containing acetate of potash, berberis aquifolium, chionanthus, and iris versicolor. With this treatment, together with such occasional remedies as the changing condition of the patient called for, I was able to discharge him at the expiration of three months, and in better condition than at any time for five years previously.

Case 3.—Mrs. B——, aged 40, married, mother of five children, and pregnant; complained of sore throat, to which she had been subject for years and for which she had been in the habit of treating herself—but her old and tried remedies had failed. She also complained of neuralgic pains in the sacral and pubic bones, very much aggravated and often excruciating at night; chloroform and morphine had been used freely without affording relief. I diagnosed her case as syphilitic, from the character of the ulcer in the throat and the nocturnal exacerbations of the neuralgia. A little later she was confined, when chancroids and chancres appeared around the vulva, with syphilitic papilloma on the scalp and venereal sores on the roof of the mouth; the baby also had sores in the mouth, the characteristic copper tinge, and papilloma of the scalp. The remedies in this case were phytolacca, thuja occidentalis, iris versicolor, chionanthus, iodide and acetate of potash; dilute solution of copper sulphate as a mouth and throat wash; the tissue salts as indicated—magnesium phosphate, potassium muriate, silica, and calcic fluoride. She made a good recovery in about ten weeks.

Case 4.—J. F——, aged 27, unmarried, consulted me in reference to a vesicle on the

lans penis. He was strong, rugged, of good hysique, and, apart from mental worry, suf-ered in no way. He was assured that he had ontracted syphilis, which would manifest it-elf in a few weeks or months by certain ymptoms characteristic of and peculiar to his disease, which were explained. In seven eeks he returned complaining of severe ccipital headache, and a copper-colored ab-ominal rash, patches on the tongue and roof f the mouth, and marked vascularity of the ucous membrane of the throat; there now emained no doubt as to syphilis. He was laced upon berberis aquifolium, stillingia, nd phytolacca, and after two weeks on yel-ow dock and tag alder, with iron phosphate nd potassium muriate according to the re-uirements of the case, and in eight weeks all erceptible traces of the disease had vanished. ix months later some small white patches ppeared at three separate times, which soon isappeared under the use of the tissue salts.

The all-important element in the treatment f syphilitic sequelæ is to restore the patient to condition as near perfect health as possible. irst prohibit the use of all alcoholic bever-ges, then outline a course of living in strict ccordance with hygienic law.—Emphasize he necessity of this and sobriety if the patient would be relieved. Local lesions may be treat-d and removed by appropriate methods, med-cal or surgical, according to circumstances.

In all cases of syphilitic sequelæ a lowered itality will be met with that will require a onic treatment. My favorite prescription or this purpose is:

℞ Quinine, 10 grains.
Sulphuric acid, q. s.
Fluid extract nux vomica, ℥10 minims.
Fluid hydrastis, 20 minims.
Fluid extract pulsatilla, 15 minims.
Potassium acetate, 1 drachm.
Cinnamon-water, 3 ounces.

One drachm three times a day.

If proper attention be paid to the restora-ion of normal vitality by the use of proper ood and proper hygiene, with an intelligent nd painstaking selection of the indicated emedies, vegetable or tissue, success can be ttained in the treatment of syphilis. But e it remembered that after the more prom-nent symptoms are removed, the patient must be under observation and treatment for t least three years for the complete elimina-ion of the disease from the system.

Kokomo, Colorado.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., JUNE 25th, 1895.

Editorial.

WHAT IS THERE TO KOLA?

This query is well answered by a paper appearing in the *Scientific Review* from the pen of Doctor Gustave La Bon. When he first began the study of Kola he queried if the action of the drug was not attributable to the contained Caffeine. But with the latter he obtained a stimulation much more cerebral than muscular, no increased resistance to fatigue, and always followed by depression; while the Kola nut, on the contrary, induced prolonged stimulation, making it possible to withstand fatigue. This evidenced that the active element of the Kola did not reside in the contained Caffeine alone.

Then he experimented with Theobromine, and administered as high as one and a half grains of this salt on several occasions to a number of acquaintances and friends without their knowledge. The effect upon himself and others he declares to have been "entirely *nil*." Next, experiments were made with a combination of Caffeine one and a half grains, and Theobromine one-third grain, whereupon the effects observed were "very much beyond preconception, and identical with those obtained from Kola nut." He concludes: "For several weeks I made use alternately of pure Kola nut and of a mixture of Caffeine and Theobromine, without observing any essential difference between the two products. I think, then, I may safely conclude that it is to the simultaneous presence of these two bodies that the Kola owes whatever properties it possesses, and more-

over that the mixture of these two alkaloids is valuable even beyond the properties of the Kola itself."

Doctor La Bon also queries why Caffeine and Theobromine when administered separately induce such different effects than those pertaining to the mixture of the two alkaloids —a question he declares he is "obliged to ignore" until such time as he can obtain further evidence.

ANENT PILLS AND INSOLUBLE MEDICAMENTS.

It is well known that in certain physical conditions unsatisfactory results are likely to follow the employment of medication in pill or compressed-tablet form—whether these pharmaceuticals be made extemporaneously by the prescriber, prepared by the retail pharmacist, or manufactured in quantities by the large pharmaceutical laboratories.

Complaints to this effect are most common in districts characterized by the prevalence of so-called malaria. The malarious condition is one "covering a multitude of sins," and presents many phases, prominent among which is either total inhibition of secretion, or excessive secretion of abnormal character —both these conditions tending to inhibit action of the medicament if it is not readily soluble. This class of cases, as a rule, respond more readily to the fluid form of medication; yet the latter is not always convenient or possible. In even the torpid stomach, muscular activity is readily excited by the ingestion of any foreign substance, and is very apt to force a smooth body like a pill or tablet, coated perhaps with ropy mucus, into the intestine undissolved, and as a result the medicament passes on through the alimentary canal without disintegration. In many such instances the administration of a moderate amount of fluid—or, better still, a small portion of food—a few minutes prior to the ingestion of the medicament, will pave the way for the solution and absorption of the latter. But where the stomach is entirely subjective and devoid of secretion, it is vain to expect any medicament to be either dissolved, absorbed, or digested; the occasions are frequent in malarial attacks and cerebral and other maladies wherein an entire meal, ingested some hours previously, has been rejected in precisely the same condition in which it entered the stomach.

Some years since there appeared in *Braithwaite's Retrospect* an abstract of a paper by a prominent English practitioner wherein were noted several cases that should by right have resulted fatally under the action of arsenic, morphine, and quinine, but in which the patient owed his life solely to gastric inactivity. Instructions were given that twenty-four pills of this combination should be taken, one every two hours until relief was obtained. Two days later the practitioner received from the nurse information to the effect that all the pills had been ingested in accordance with directions, but that the fæces presented a peculiar appearance. Examination of the latter revealed the fact that the entire two dozen pills had passed undissolved. Only a few years since, also, the editor of this journal prescribed a number of quinine pills, sugar-coated, and found later that the entire number had passed with the coating intact.

In the first instance, what would have been the result had a sudden access of digestive activity dissolved the entire two dozen pills of arsenic and morphine; and what medico-legal aspects would have presented?

In addition to the risks involved in the passage through the stomach undissolved of a pilular or tabular medicament, comes the consideration of the fact that remedies, even when assimilated, differ in activity according to the peculiarities of the patient and of the disease. Thus, a cathartic prescription will act more freely, promptly and effectively in one person than in another; a medicament taken in health is quite a different matter from one administered in a condition of morbidity. We cannot, therefore, expect that any one formula will at all times and on all occasions act with perfect uniformity. The compound cathartics in the United States Pharmacopœia, for instance, under varying conditions of bodily secretion, may have their activity either increased or greatly diminished! This fact, coupled with the tendency to routinism which infests our profession, has led to captious criticism of this compound (and it is only one of scores upon scores of pharmacopœial preparations that have been thus stigmatized). The result has

been the introduction of preparations under this title that are sophisticated, and of others which purport to be *improvements;* the intent in either instance being to secure an *invariable* cathartic effect without regard to formula or condition of patient. In some of these, for the colocynth compound (which if pure is a somewhat expensive preparation) is substituted aloin, croton oil, elaterium, or certain of the *Euphorbiaceæ*, often in proportions so small as to defy the analyst—especially is this true of croton oil. This substitution is upheld by the plea of the necessity of securing on all occasions an absolute cathartic effect, which is demanded by the average prescriber without regard to conditions. But the medical man should remember that in handling medicaments that are universally and unfailingly cathartic he has to deal with an indefinite and unknown quantity, and is moreover being swindled as to value, monetary as well as therapeutic. Aloin, croton oil, etc., may be much more active than colocynth compound—they certainly are sold much more cheaply than scammony, which is the principal ingredient of the colocynth preparation; but, valuable as they are in their places as medicaments, it cannot be said that they are preferable on all occasions to the latter. Finally, such substitution speaks little for the honesty of the manufacturer, who may well consider the applicability of the aphorism, "*Falsum in uno, falsum in omnibus.*"

Neither a pill nor a compressed tablet should be administered until some measure has been taken to secure its solution; where the gastric viscus is lined with thick, ropy mucus, even that uncertain therapeutic abomination, the tablet triturate, if not previously dissolved, may be equally inert. Under such conditions it is often advisable for the patient to first take a glass of water, as hot as can be borne, in order to lave or flush out the stomach—to carry off its objectionable contents into the intestines,—then partake of a bit of fruit or other food to excite gastric action, and in a few minutes complete the performance by swallowing the prescribed drug. Pathological peculiarities and individual idiosyncrasies must be kept in mind. If, for instance, a cathartic is in question, and there is reason to believe this medicament has been wholly disintegrated or dissolved and yet does not manifest its therapeutic effect, it may then perhaps be proper to consider the advisability of administering some more active and irritating agent, like croton oil, to be prepared extemporaneously by the prescriber or his pharmacist.

Here may be mentioned the fact that the aperient combinations of aloin or colocynth compound with nux vomica, belladonna, or atropine, sometimes appear to vary greatly in activity. This combination in a person of bilious temperament or of dark complexion is invariably less active than in one of opposite temperament; *per contra*, in flaxen-haired individuals, particularly those of the fair sex, this same aperient may simulate the activity of a drastic cathartic. Where activity in any way depends upon atropine or belladonna, extreme caution is necessary in administering to blonde females.

Recently, too, have been encountered pills and tablets the chief ingredient of which purported to be cascara sagrada, a drug that is in no sense a cathartic, and whose apparent action as such, consequently, can be secured only by undue sophistication; and the character of the stools and of the headaches that followed were *prima facie* evidence of the presence of croton oil.

In conclusion it may be said that it is not only frequently advisable, but sometimes imperatively demanded, that the form of the medicament should be changed from solid to fluid. In malarial conditions, quinine, especially its sulphate salt, is with great difficulty absorbed, hence is preferably prescribed in the form of a liquid in conjunction with an acid, or of a powder encased in capsule. The muriate salt in connection with hydrochloric acid is greatly to be preferred, because of its superior assimilability, and also for its greater content of quinine alkaloid.

Finally, the physician in prescribing for any malady should always bring to bear the actual and possible physiological relations of the drug to the pathology of the disease; and though pills and tablets may perhaps be prescribed with advantage and are more popular with the patient, the first suspicion of inactivity should suggest the employment of some other form of the drug.

IPECAC IN ALCOHOLISM.

Doctor Waugh declares that while treating a patient for alcoholism and desiring something to render spirits nauseous, he administered twenty minims of fluid extract of Ipecac, without inducing any suggestion of emetic effect; on the contrary, the sufferer went to sleep and slept all night, which was the more "curious, as previously forty-grain doses of chloral and of sulphonal failed to induce such result." The next day the same dose was prescribed, and he slept all day. During the week following the patient obtained sleep every night by means of Ipecac, and with the best possible results. The fluid extract was employed in doses varying from ten to thirty minims, with no water, followed by dorsal decubitus for at least five minutes in order to avoid possible nausea and vomiting, this being the method whereby Ipecac is given in the grave forms of dysentery.

This same measure was greatly advocated in Great Britain during 1859–68, and received general praise, though for some unknown reason chloral ultimately superseded the Ipecac. By consulting the files of *Braithwaite's Retrospect* it will be discovered that Doctor Waugh's experience is neither new or novel.

EMPYEMA OF THE ANTRUM OF HIGHMORE.

Doctor Adolph Bronner stated to the Laryngological Society of London that this disease is often overlooked, and is more common than is generally believed. He did not recommend large openings, on account of the deformity that might follow; nor did he always find it necessary, when the alveolar process was opened, to introduce a tube therein and keep it in position.

Doctor Greville Macdonald maintained that it was the custom to trust for diagnosis too implicitly on the replacement of the pus in the middle meatus on bending forward the head. He had seen at least a dozen cases, some of them associated with antrum disease, others not, where suppuration in the frontal sinus produced the same phenomenon. As far as treatment was concerned—his remarks did not refer to cases with coexisting nose disease—he believed that an exploratory opening along the alveolar border, and drainage with the smallest-sized drainage tube was sufficient for recent cases; in those of longer duration he occasionally found it necessary to make a large opening for the insertion of the finger, and after scraping away granulations, etc., had always secured good results.

HERNIA CEREBRI.

An Eastern exchange states that "the best treatment, as laid down by Doctor Keen, for hernia cerebri, is to dress once or twice a day antiseptically, and if it heals very slowly to resort to skin-grafting."

All this may be very well, but the sooner it is recognized that hernia cerebri is a bugbear rather than otherwise, that it is the invariable result of pressure from behind, and in the majority if not all instances due to an accumulation of pus, the better both for practitioner and patient. The relief from this condition of affairs is always *the knife!* And the knife is a much less dangerous or drastic remedy than is commonly imagined.

EDITORIAL NOTES.

Black Cohosh as a Local Anodyne.—

To relieve the pain of photophobia, Doctor H. Z. Gill, of Pittsburgh, recommends the tincture or other fluid preparation of Cimicifuga. The fluid preparations of this drug hold in solution a considerable amount of gummy material which on evaporation leaves behind a yellow coating that can subsequently be easily washed off. Doctor Gill considers it more definitely remedial in case of ulceration of the cornea and other inflammatory conditions of the eye than any other drug; he applies by means of a camel-hair brush, using half a drachm for each eye, and relief, he declares, "is experienced in from fifteen to twenty minutes, and will continue from half an hour to half a day."

He has also found it relieves otalgia when painted around the ear. Latterly he has found the fluid extract, with a strength of ninety-four per cent., as made by Parke, Davis & Co., the most satisfactory preparation. He declares *Cimicifuga racemosa* is one of our most valuable anodynes.

lagiarism.—

An article on the hypodermatic syringe, by octor Hartwell N. Lyon, appears in the May umber of *Meyer Brothers' Druggist*, the hief portion of which is taken from the intro- uction to Bourneville and Bricon's "Hypo- ermic Medication," published by Mr. George . Davis, of Detroit. We do not know how ie publisher may feel about the matter; yet, hile the unconscious assimilation may be omplimentary, due credit would have been uch more so.

Sweet Vermine: Don't they Charm the Sick?"—

Statistics show that up to 1839 one million eeches were supplied to the Parisian hos- itals annually, which number twelve years ter had decreased to 50,000 annually. To- ay we hardly hear of these creatures in edical practice, save among certain special- sts and the French practitioners of Lower anada and Louisiana.

he Michigan State Medical Society.—

This organization on June 7th closed a very uccessful session at Bay City. The officers or the ensuing year are: President, Victor C. aughan, Ann Arbor; Vice-Presidents—Hugh McColl, Lapeer; R. W. Erwin, Bay ity; F. B. Tibbals, F. G. Novy, Ann Arbor; reasurer, William G. Henry, Detroit; Sec- etary, C. H. Johnston, Grand Rapids.

nti-Alcoholism.—

A paragraph is going the rounds of the edical press to the effect that seven-minim oses of Strophanthus tincture induce a dis- aste and even disgust for alcoholic bever- ges; that there is nausea without emesis.

It is needless to say this is rank rubbish.

Query.—

We are in receipt of a communication from gentleman signing himself "Tom Nox," osemite Place, Pa. We are unable to find ny such postoffice, and shall be very glad to ear from the author of this paper with his roper address.

rysipelas Toxins.—

There is no longer any doubt that the treat- nent of sarcoma and other morbid growths y erysipelas toxins is a complete failure.

Items and News.

Clergymen of Letters, and What They Know of Medicine.—

In a recent article by Zangwill he relates a fable with a moral: "A pretty grey Mouse was in the habit of sauntering from its hole every evening to pick up the crumbs in the dining-room. 'What a pretty Mouse!' said the Householder, and made more crumbs for Mousie to eat. So great a Banquet was thus spread that the noble-hearted little Mouse cheeped the news to its sisters and its cousins and its aunts, and they all came every even- ing in the Train of its Tail to regale them- selves on the remains of the Repast. 'Dear, dear!' cried the Householder in despair, 'the House is over-run with a plague of vermin!' And he mixed Poison with the crumbs, and the poor little Pioneer Mouse perished in contortions of agony." *Moral:* Don't.

Several Episcopal clergymen, along with some Baptist brethren, a few eminent (?) Methodist divines with *tails* to their names, and a Congregational whose *tail* has not yet sprouted, one day crawled out of their theo- logical hole and partook of the feast spread for them by a certain patent remedy. And having tasted of this great health giving re- storative, their magnanimous and unctuous souls swelled within themselves and they de- sired to let others know. Some of them with the *tail* Dangling Downward, others with it Drawn Closely 'Longside of them, and yet others with it Lying Loosely Behind, saun- tered forth and proclaimed to the suffering thousands what a healer they had found.

As to this particular instance, we have nothing to say, but how often have we seen the Eminent (?) Divine stand on the public platform and denounce the liquor traffic, the rum-seller, yes, and even the physician who has used, perhaps, the only remedy that will keep life in a dying body. And have we not known him on his way home to call on some convalescent parishioner and advise him to take some *nostrum*—"It did *me* so much good when I was just like you"—little knowing that its chief and perhaps its only value de- pends upon the large percentage of alcohol that it contains. *Moral:* Don't.—*Ontario Medical Journal.*

Butter versus Margarine.—

Bacteriology has now metaphorically seized butter by the throat. If milk, the bacteriolo- gists say, is a great vehicle of disease, why should not butter be? The reasoning is fair, and there is no answer to the query. The scientific examination of butter has begun.

The experimentors, working at widely different geographical centres in search of the bacilli of tuberculosis, found them. One of the bacteriologists inoculated guinea-pigs with the bacilli, and caused the development of tuberculosis. Twenty samples of butter, purchased in twenty different markets, were examined, and, with two exceptions only, were found to contain the bacilli in question. In another case *eighty* per cent. of the samples contained the germ. Mr. Van Den Bergh stated the other day that butter was inferior to margarine. We wonder if he had in his mind these bacteriological results as well as chemical ones.—*Food and Sanitation.*

Degeneracy.—

Medicine, in common with other arts and sciences, has suffered from the tendency to degeneration. The epidemic of fads with which the profession has been afflicted—bacteriology, tuberculin, animal extracts, *et al.*—are all results of this condition. But medical men have not the same excuse which the laity might plead for being led astray. They should be able to distinguish between science and degeneracy, genius and insanity, the false and the true, if they are to practice the exacting vocation of medicine. There is, however, a slowly widening rift in the cloud of opprobrium which has darkened the medical horizon. Many of our best men are taking an unqualified stand upon the side of right and truth, and we hope, ere long, to see the present era of false prophets and fetichism relegated to oblivion.—*Medical Brief.*

The Distinction.—

Cockney Employer (to Highland gamekeeper addicted to a drop o' the cratur): "Now, then, Donald, you really must amend. Your breaches of regulations cannot be tolerated much longer. You will be liable to instant dismissal otherwise."

Donald: "Mend my preeches, serr! Why, serr, ton't you see me wearing ta kilts? It iss her nainsel' woot nefer tiskrase her goot Hielant leks with preeches, ant it iss your nainsel', serr, can tismiss me when you catch me in preeks, ay ant gife me ta sack mirover. Preeches inteet; as if I woot risk catching cold wearing such things!"

Modern Teetotalism.—

The *Medical Times* says there is a great boom in temperance saloons in the East End, London. The public houses are deserted, and the "ginger pop" shops are besieged by clamoring crowds of thirsty souls—and the East End thirsty one is a masterpiece of his kind. This sudden conversion—after temperanc lecturers, the Salvation Army and a host o other reforming agencies had failed to mak an impression on the imbibing proclivities o the East Ender—has puzzled the local soci reformers sorely. The clew to the myster has, however, been discovered by Mr. Stoke public analyst for Bethnal Green, who ha analyzed a sample of the ginger wine sold a temperance beverage shops and found it t contain ten per cent. of proof spirits, or a alcoholic strength just double that of ordi nary beer.—*Medical Record.*

Sex in Eggs.—

Some years ago there appeared in a Ger man paper a method by which the sex of egg could be distinguished, viz.: In the evenin hold them to a bright light to observe wher the air cell is located, which can be seen a a dark spot about the size of a five-cen piece. In the male chicks it is located at th thick end of the egg, while in the female it i located at one side of the end. I have mad use of this freely, and in consequence hav nearly all pullets and only a few cockerels the latter having been hatched on purpose.—*Poultry Keeper.*

Salacity in Medical Journals.—

The *Woman's Medical Journal* for March last in one editorial fiercely denounces the "salacious in medical journals," and in another as strongly endorses a new aphrodisiac as "one of the few specifics we have; the results obtained from its use in impotence were really surprising." The juxtaposition of the praise of the aphrodisiac and the discovery of salacity in the medical journals is amusingly suggestive, to say the least.—*Medical Standard.*

Consumption.—

Brother Lawrence, of the *Medical Brief*, says he is of a consumptive family; "hence, early in life, made two resolutions: To gain all possible knowledge concerning consumption, and to decline having the disease. The results are an extensive library pertaining to tuberculosis, vigorous health, and a firm conviction that the disease is due to malnutrition, assisted by those habits of life which tend to decrease the vital force."

How is This?—

A Chicago correspondent of the *Medical Summary* coolly asserts that "the communion-table is the source of much drunkenness," and should be done away with unless something besides wine can be used. If this be

:ue, the alleged danger of microbic infection :om passing the cup is a mere trifle in comarison.—*New York Medical Times.*

[And both are utterly idiotic.—ED. AGE.]

. Centenarian.—

Mrs. Catharine Scott died at her home in :rooklyn, April 21st, at the age of one undred and three years. But for a fracture f the thigh she would probably have lived everal years more, as her health had always een excellent. Despite her great age she ad not a gray hair, and was able to read ithout glasses.—*Boston Medical and Surgical Journal.*

.dvice to Surgeons.—

Do not spit on your hands before operating —the saliva contains microbes!

After an operation of laparotomy, do not orget to count your assistants—one of them ight have remained in the abdomen.—*merican Medical Journal.*

he Truth, the Whole Truth.—

If we will bear in mind the complexity of oman's nervous system, and the tyranny hat it exercises over her, we will be able to reat her better than the one who thinks of er as a woman only because she has a omb.—WILLIAM GOODELL.

)titis Media.—

Tetra-borate of soda is recommended in hronic purulent otitis media, to replace boric cid. It is the result of heating equal parts f the latter, borax, and water; the precipiate on cooling is neutral.—*Medical Standard.*

Restoring Gray Hair.—

It is stated that the persistent use of phos-horized cod-liver oil will, in some cases at east, restore gray hair to its original color nd prevent dark hair from turning gray.—*Medical Times.*

nsurance Companies and Exhumation.—

Insurance companies have no right, acording to a recent decision, to demand xhumation, unless the contract calls for uch examination in unequivocal terms.—*Exchange.*

Strange Accident.—

A young man in Jeffersonville, Indiana, ost the sight of both eyes by the explosion f the pneumatic tire on his bicycle. He vas inflating the tube when it exploded.

Book Reviews.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 per year. Harry C. Jones, New York.

The June number contains "A Constructor and Dramatist," by Alfred Trumble; "The Value of Nationalism in Art," by Edward King; "Heredity in Art," by Hilliary Bell; "Some Scotch Castles and Their Stories," by Charles Turner; "The Flower Slippers of Venus," by Lennie Greenlee; "Casts and Tapestry in Room Decoration," by Clarence Cook; "The Art of a Scene Painter," by Alex. Ramsay; "The Wampum Records of the Iroquois," by Harriet M. Converse; "Women as Admirers of Cattle," by P. G. Hubert; "New England and Old Italy," by Polly King; "Game Birds in Japan," by E. Ingersoll; "Pottery of the North American Indians," second paper, by W. J. Hoffman. The illustrations are unusually fine, and are by Henry Mosler, Eastman Johnson, Diana Coomans, Carleton Wiggins, C. K. Linson, John Rettig, J. Francis Murphy, and others.

THE CENTURY MAGAZINE. Price, 35 cents; $4.00 per year. The Century Co., New York.

The chief contents of the June number are: "The Comédie Francaise at Orange," by Thomas A. Janvier; "The World's Need," by Ella Wheeler Wilcox; "Casa Braccio," chapter VIII, by F. Marion Crawford; "A Business Transaction," by James J. Roche; "Life of Napoleon Bonaparte," continued, by William M. Sloane; "The Discovery of Glacier Bay," by John Muir; "The Princess Sonia," part II, by Julia Magruder; "The New Public Library in Boston," by Mrs. Van Rensselaer and Lindsay Swift; "On a Side Track," by Mary Hallock Foote; "The Lady of Lucerne," by F. Hopkinson Smith; "Two Tramps in England," by Josiah Flynt; "The New Old Testament," by Newman Smyth; and "The Gentleman in the Barrel," by Chester B. Fernald.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

The June number opens with "From the Divine Oracles to the Higher Criticism," by Doctor Andrew D. White, which forms the closing division of Warfare of Science; Herbert Spencer continues the discussion of "Professional Institutions"—Physician and Surgeon; Barton W. Evermann describes "Two-Ocean Pass;" "The Decline in Railway Charges" is discussed by H. T. Newcomb; "The Psychology of Woman" is by Professor G. T. W. Patrick; D. T. McDou-

gal writes of "Irritability and Movement in Plants;" "The Spirit of Militarism" is by A. B. Ronne; "Journeying in Madagascar," by Frank Vincent; "Survivals of Sun-Worship," by Fanny D. Bergen.

THE ECLECTIC MAGAZINE. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The June number is extremely rich in selections: "The Relation of Language to Thought" is by E. N. Borham; "Penalties of Ignorance," by Lady Priestly; "Glasgow, a Model Municipality," by Garratt Fisher; "The Fiction of Sexuality," by James A. Noble; "Twelve Hundred Miles in a Wagon," by Alice Balfour; "Impressions of India," by C. F. Cary; "Through the Jenolean Caves of New South Wales," by T. J. Mann; "A Heroine of France," by Mrs. Andrew Crosse; "The Backwater of Life," by James Payn; "Delphi," by Reginald Lister; and "An Evening in a Moorish Café," by J. E. Budgett Meakin. Foreign literature, notes, miscellany, etc., complete the number.

THE NORTH AMERICAN REVIEW. Price, 50 cents; $5.00 per year. The North American Review Co., New York.

In the current issue the "Power of the Wealth of the United States" is discussed by W. S. Mulhall; "England, Venezuela, and the Monroe Doctrine," by Henry Cabot Lodge; Charles Dickens the younger continues his reminiscences of his father; the Secretary of the U. S. Navy writes of the "Lessons of the Chino-Japanese War;" "The Silver Question" is discussed by Count von Mirbach and the Mexican Minister; the Marquis of Lorne pens "Some Thoughts on Canada;" and Albert B. Van Damm continues his "Personal History of the Second Empire." There are also notes and comments of more or less interesting character.

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards & Docker Co., Philadelphia.

In the June number will be found: "Daemonelix a Burrow," by Erwin H. Barbour; "On Successive, Protandric, and Proterogynic Hermaphroditism in Animals," by Thomas H. Montgomery; "Sponges, Recent and Fossil," by Joseph F. James; "Mouth-Parts of Lepidoptera," by Vernon L. Kellogg. Also the usual departments devoted to Literature, Mineralogy, Petrography, Geology, Palæontology, Botany, Vegetable Physiology, Zoölogy, Embryology, Anthropology, Proceedings of Societies, etc. The paper on "Hermaphroditism" is especially of interes to anatomists and physiologists, comparativ and special.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.5 per year. Ontario Publishing Co., Toronto.

The contents of the June number are "Gladstone's Odes of Horace," by E. A Meredith; "The Re-armament of the Mil itia," by Captain Charles F. Winter; "A Member of Parliament for the University, by Thomas Hodgins; "Rome Revisited," b C. R. W. Biggar; "At Point Aux-Pins," b Jean Blewitt; "Yuba Dam Trout," by A. M R. Gordon; "The Story of Castle Frank," by Reverend Henry Scadding; "The La barum: In Hoc Signo Vinces," by Arthu Harvey; "A Glimpse of Portland," by Rober E. Noble. There are the usual "Gabl Ends," "Reviews," etc.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 year. Donahoe's Magazine Co., Boston.

The number for June is an excellent one containing an assortment of interesting popu lar articles not surpassed by any of the current monthlies. The contributions are "Building and Loan Associations," by Davic Mitchell; "Cremation in the Past," by S Baring-Gould; "Ruskin as a Poet," by Rev erend John Conway; "Execution of Mrs Surratt," by Charles S. O'Neill; "Three Artist Monks of Florence," by Julie Caroline O'Hara. There are the usual sketches in lighter vein, poetical effusions, etc.

ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The June number contains installments of the two serials, by Mrs. Ward and Gilbert Parker; also a story of frontier garrison life by Ellen Mackubin, entitled "Rosita;" another bit of fiction is "Through the Windows;" Lafcadio Hearn contributes "In the Twilight of the Gods," and Mary Stockton Hunter "A Japanese Sword Song;" there is likewise "A Reminiscence of Christina Rossetti," by William Sharp, and the conclusion of "A Week on Walden's Ridge," by Bradford Torrey.

OUTING. Price, 25 cents; $3.00 a year. The Outing Co., New York.

The June number contains: "The Little Tailor of the Ritten," by Jean Porter Rudd; "Trotting and Pacing Champions of 1894," by "Dexter;" "When Rustics Went Trouting," by Eleanor French; "Frogging in Northern Waters," by "Jess;" "The Cruise

f Two," by Charles Gordon Rogers; "Outfit or Camping and Tramping," by William H. Hobbs; "Old Uncle Vanderveer" (concluded), by Edgar Fawcett; "Bear Hunting n Japan," by "Rellim."

EVIEW OF REVIEWS. Price, 25 cents; $2.50 a year. The Review of Reviews Co., New York.

The leading articles for June are "College Oratory in the West," and "The Passion Play t Howitz." Among the topics discussed re: "Coin's Financial School;" "The Case f the Bimetallists;" "The South Carolina tate Dispensary;" "Chicago and the Fire;" How Joseph Parker Would Rebuild Lonlon;" "The Truth about the New Czar;" Our Spain of To-day;" "Crowded Schools s Promoters of Disease," etc.

VERLAND MONTHLY. Price, 25 cents; $3.00 per year. Overland Monthly Publishing Co., San Francisco.

The June is a Hawaiian number, and is levoted to the past and present of these slands, being also a specious defense of the o-called Republic. The man who most eprecates monarchical customs still has the anity to exhibit himself in court dress. As sual, there is the charming department "As Talked in the Sanctum," without which no umber of this magazine would be complete.

HE PETERSON MAGAZINE. Price, 10 cents; $1.00 a year. Penfield Brothers, New York.

The June number contains: "George Washngton," by T. J. Mackey; "A Green Mounain Miracle," by Henry Edward Rood; Early Women Play-Makers," by Mary Penield; "Under a Jacklight," by G. B. Drake; The Proposed Public Library of New York," y S. Turner Willis; "American and English team Yachts," anonymous.

RAVAUX D'ÉLECTROTHÉRAPIE GYNÉCOLOGIQUE. By Doctor G. Apostoli. Vol. I. Paper; 8vo; pp. 748. Société d'Editions Scientifiques, Paris, France.

Apostoli has devoted many years to the linical study of electricity as a therapeutic gent in gynæcological treatment. The presnt volume embodies a number of the more mportant contributions to the literature of he subject, translated into French from the English, Belgian, Austrian, Danish, Polish, Hungarian, and Canadian literature, and represents a vast amount of editorial and original abor. It is well worthy of study by those who are interested in the remedial potency f the electric current.

Therapeutic Brevities.

Cocaine in Local Anæsthesia.—It is not generally realized that weak solutions of cocaine, employed hypodermatically, will induce local anæsthesia as successfully as the stronger ones commonly prescribed. The feebler solution is not only an economy, but, what is far more important, it avoids the very dangerous result of intoxication induced by five- or ten-per-cent. solutions. For two years Professor Roux of Lausanne has used only a one-per-cent. solution, which he has found sufficient for such operations as herniotomies and removal of goitres, without any general anæsthesia. Schleich uses even a weaker solution, and has found that a 0.02-per-cent. solution produced anæsthesia after injection.

A formula which allows of a cocaine solution being kept for use without fear of deterioration is:

Cocaine muriate, 0.20 gramme.
Morphine muriate, 0.02 gramme.
Sodium chloride, 0.20 gramme.
Carbolic acid (5-per-cent. solution), 0.13 gramme.
Distilled water, 93 grammes.

This is for use on painful areas; for operations on healthy parts the amount of cocaine is reduced one-half.—*Practitioner* (London).

* * *

The amount of cocaine used in local anæsthesia must be in proportion to extent of surface it is desired to anæsthetize; in no case should the quantity exceed one grain and three-quarters.

Cocaine should never be used where either heart or pulmonary disease exists, nor in persons of highly nervous temperament.

In injecting cocaine, the intra-dermatic method is preferable to the hypodermatic. By injecting into—not under—the mucous membrane or skin, the risk of entering a blood-vessel is avoided.

During injection the patient should always be in a recumbent position, and in operations upon the nose and throat the head should not be raised until anæsthesia is complete.

It is of great importance that the cocaine should be absolutely pure, since its combination with certain other alkaloids results in poisonous compounds. — *Brooklyn Medical Journal.*

The Danger of Anæsthetizing Diabetics.—Baxter reports three of his own cases and nine collected from medical literature, and calls attention to the danger of narcotizing

diabetics; even in slight cases the patients became comatose and died, though the coma did not develop until the chloroform narcosis had passed off, sometimes not until after twenty-four to forty-eight hours had elapsed. The patients became indifferent, stupid, and confused, and finally lost consciousness; passed urine and fæces involuntarily; and died in coma. This is important, since it shows the administration of chloroform is dangerous even when there is but a slight degree of diabetes, it being impossible to predict whether or not coma will develop. —*Deutsche Medicinische Wochenschrift.*

Phulluah.—This drug, derived from a plant indigenous to the hills about Nani Tal, India, is largely employed by the native tribes for frost-bites and chilblains. When topically employed it is said to benefit rheumatism and sprains. A case of hemiplegia also is reported where rapid result followed the use of Phulluah combined with massage.—*Medical Annual.*

[This appears to be identical practically with the Dhilo Oil made in the Fiji, Tonga, and other Pacific isles; and the necessity for massage is rather suggestive of the fact that the latter is the chief remedy. Our own experience with Dhilo Oil is that it forms a good dressing for patent leather.—Ed. Age.]

Seminal Emissions. — Potassium bromide, the popular remedy, is often unsatisfactory; sometimes it even aggravates the condition, perhaps deepens the despondency that commonly accompanies this condition. A number of physicians have given up the alkaline bromides, preferring Hyoscine, administering one-two-hundredth of a grain at bedtime. The effect is nearly always favorable, and frequently affords permanent relief. If Hyoscyamine is employed instead of Hyoscine, it is important to stop short of the point where the physiologic effect of the drug is manifested. One advantage is, either Hyoscine or Hyoscyamine properly administered can be continued for months without appreciable ill effects.—*Philadelphia Polyclinic.*

Phytolacca Decandra in Epithelioma.—This is a most valuable remedy in epithelioma. "I bruise the green leaves to a pulp, express the juice, evaporate to thick paste, spread on a piece of silk or cloth, and apply, removing and re-applying twice daily until the morbid growth is destroyed. A band of cicatricial tissue begins to spread from the periphery, and as this occurs the plaster is made smaller each day to conform to the size and shape of the diseased mass. I have seen large epitheliomata destroyed in a few weeks and nothing but a faint scar remain. It is safe, can be used fearlessly, and in no case is there a recurrence."—Doctor E. G. Goodman, in *North Carolina Medical Journal.*

Action of Iron on the Organism.—The results of Rosendahl's experiments seem to show that the iron salts of the Pharmacopœia are not assimilated by the alimentary canal of man or mammals if this tube is in a normal condition. After their administration by the mouth they cannot serve as material for the elaboration of hæmaglobin, nor directly influence it. For the treatment of chlorosis, Ferratin is much superior to the preparations of iron in use at present, and this new remedy may be destined to replace the latter, since the principal object of treatment of chlorosis is to increase the strength of the blood in hæmoglobin.—*Medical Review.*

Hydrocele.—Insert a trocar into the most dependent part of the swelling, and draw off the fluid. Then inject a five-per-cent. solution of Carbolic acid, and remove almost immediately. The trocar is introduced a second time and pushed up toward the highest point of the sac, where a counter opening is made. A drainage tube is then passed through the openings and left *in situ.* The patient can immediately get up and walk about; the drainage tube may be withdrawn on the fourth day. In a week the patient is permanently relieved. — *Medical Press and Circular.*

Cholagogue Mixture. — The following is especially available for "sluggish liver and indigestion:"

> Dilute nitro-muriatic acid, 2 drachms.
> Tincture podophyllin, 2 drachms.
> Tincture nux vomica, 2 drachms.
> Succus taraxacum, 12 drachms.
> Syrup of ginger, 6 drachms.
> Peppermint-water, sufficient to make 6 ounces.
>
> A tablespoonful three times a day in water.

—*Practitioner* (London).

Form of Quinine to be Preferred.—Berlioz and Boymond, after thoroughly investigating this subject, arrived at the following conclusions: Quinine hydrochlorate is to be pre-

ferred, as being sufficiently soluble and containing the largest quantity of the alkaloid; is also less irritating to the digestive passages than the sulphate. Pressed preparations should be absolutely rejected. After solutions, pills made with a soluble excipient, or enclosed in gelatin, are the preparations to be chosen.—*Bulletin de Thérapeutique.*

"*Swelled Head.*"—The following is recommended as a "pick-me-up" after over-indulgence in alcohol:

Sodium bromide, 15 grains.
Chloroform spirit, 20 minims.
Compound tincture gentian, 10 minims.
Compound tincture cardamoms, 10 minims.
Aromatic spirit ammonia, 10 minims.
Simple elixir, 30 minims.
Peppermint-water, to make one ounce.

Depilatory for Surgical Operation.—To remove hair from scalp, peri-anal, or scrotal region, without the razor, cut the growth with scissors, then apply paste made of sulphohydrate of calcium mixed with a little water; make the layer one millimeter thick. There is no pain or erythema, yet in less than ten minutes the hair can be rubbed or washed off. It will grow again in a few days.—*La Médecine Moderne.*

Infantile Flatulent Colic.—As a symptomatic treatment a teaspoonful of the following three times a day, before meals, gives excellent results:

℞ Fluid extract ginger, 90 minims.
Tincture asafœtida, 3 drachms.
Peppermint-water, 1 ounce.
Cinnamon-water, 1 ounce.
Simple syrup, 4 ounces.

—*Practitioner* (London).

Nitro-glycerin as an Anti-Neuralgic.—Glonoin has been recommended as an anti-neuralgic, especially in cases of inveterate sciatica, as follows:

℞ Solution nitro-glycerin (1-per-cent.), 75 minims.
Tincture capsicum, 90 minims.
Peppermint-water, ½ ounce.

Dose, five to ten drops in water three times daily.

Grindelia Robusta.—M. Jasiewilz claims this drug to be extremely efficacious in diseases of the respiratory tract, and remarkable for its action in dyspnœa. Its especial value, he thinks, is for disorders of nervous origin, as asthma and the croupy cough of laryngismus stridulus. He declares its action is more rapid than that of belladonna.—*Medical Annual.*

Hypodermatic Purgatives.—Ewald, of Berlin, maintains that a mixture of equal parts of Caffeine and Chloral, in a one-to-five solution, when administered subcutaneously in doses of fifteen minims, will act as a purgative. He employs it particularly in acute rheumatism, where it also appears to act as a sedative.—*Medical Chronicle.*

Camphor Monobromate.—This drug, thoroughly triturated with sugar of milk and administered in small doses, is a specific in all disorders of children induced by reflex nervous irritation, especially those of dentition.—*Medical Summary.*

Management of Tetanus.—Recently several cases suffering from this malady have been reported as being permanently relieved by from one to three inhalations of Chloroform per day, each from two to four drachms.

Veratrum as an Antiphlogistic.—I would not give Veratrum for every other antiphlogistic in the materia medica in cases of emergencies with weak heart or full bounding pulse.—W. J. Brown, in *Georgia Eclectic.*

Chekan.—Doctor Manley recommends the fluid extract as of particular value in chronic catarrhal affections of the lungs. — *North American Journal of Homœopathy.*

Toadstool Poisoning.—This may be readily relieved by the subcutaneous injection of 0.015 grain of Strychnine.—Königsdorfer, in *Cartier's New Annual.*

Cascara Cordial.—This preparation is recommended by Doctor Haddock as a suitable vehicle for the salts of iron and quinine.—*Recorder.*

Oxalic Acid.—This is said to readily control neuralgia of the spermatic cord, and orchitis.

Medical Progress.

THE PRODUCTION OF DIASTASE AND OF AN ALCOHOLIC FERMENT FROM FUNGI.—This discovery is due to a Japanese chemist named Jokichi Takamine, who, while studying with Professor Mills, F.R.S., at Glasgow University, conceived the idea of improving the methods of brewing and distilling—that is to say, he satisfied himself that better converting and fermenting agents were obtainable, and that the tedious, costly, and not over-healthy process of malting was a clumsy and primitive mode of obtaining a converting agent in the form of the small production of diastase developed at so much sacrifice to the grain treated. On returning to Japan, Mr. Takamine, jointly with Professor Atkinson of Tokyo University, who published occasional contributions on the subject, undertook a long and exhaustive series of studies and experiments on many kinds of microscopic fungus or mould-growth, his object being to find a class of plant containing the two qualities of converting starch in cereals into sugars, and the sugars so obtained into alcoholic spirits. The various ferments and processes of the East, as well as of Europe, were one by one investigated only to be discarded by him; the ergots of rye and other plants whose qualities and powers are well known were not neglected; many kinds of bacteria were studied, when eventually this chemist discovered what he required in the fungus of the species *Eurotium oryzæ*, a mycelial of the Aspergillus family whose nature and characteristics were almost unknown. The qualities required and found in this fungus were three-fold—that is, the plant having the two qualities he was seeking had to possess another quality, that of being capable of withstanding a high artificial cultivation or development of the two qualities. The best and most practical medium used for growing the seed of this microscopic fungus is common hydrolized wheat bran, on the flakes of which the plant grows with great rapidity, and whilst growing it, to reproduce its own seed, is fertilized with certain chemical salts, and when matured, a process of about five days' duration, he calls it "Taka Moyashi." When grown for commercial purposes it is not fertilized, neither is it allowed to ripen in the same high-class cultivation in this form, the commercial product being known as "Taka Koji."

On examining Taka Koji with a microscope the bran flakes show, after being thirty-six to forty hours in a moist temperature of 80° F., that the roots which spread all over the surface of the bran are literally covered with minute crystals of pure diastase. At the top of the mycelial a small head is formed in which the seeds and pollen are present. While the diastase at the roots is the ferment or agent which converts starch into sugars, the unripe seeds permeated with the pollen, and which may be designated in this condition spores, give rise to the ferment or agent which converts the sugars into alcohol and which now takes the place of yeast, as the diastase replaces malt. Strange to say, when both characteristics of the fungus are at their best in this inferior cultivation as described, their properties are at their highest stage of commercial utility; but should the higher temperature and fertilization be resorted to, it is found that the diastase is entirely absorbed from the roots by the seed in the head of the mycelial, which it serves to nourish and ripen, and when the two agents become one, capable of reproducing their genera, it is found to be of little use for either purpose—for converting or fermenting. Mr. Takamine obtains his diastase in an almost pure and concentrated form by the use of percolators, washing the diastase from the bran with water, in which it is soluble, but not so in alcohol, in which it is precipitated. When dried it is of a pure crystalline nature, capable of preservation for any length of time.

The purified diastasic product consists of small, tenacious, gummy particles of a light brown color, and somewhat of the appearance of finely broken shellac; it is almost devoid of taste, but it communicates a peculiar sensation on the tongue, indicative of active digestive properties. An analysis which we made gave the following results:

	Per cent.
Moisture	15.46
Albuminoids (N = 3.65)	22.80
Mineral matters, consisting chiefly of soluble phosphate	16.22
Non-nitrogenized matter, probably carbohydrate	45.52

On trying a weighed portion with a standard starch solution it was found that over one hundred times of its weight of starch was completely converted in thirty minutes at blood heat. Doubtless at higher temperatures it would convert even a much larger quantity, it being stated that under favorable conditions it will digest as much as a thousand times its weight of starch. Hitherto the digestive properties of diastase have been appropriated chiefly by using active extracts of malt, which of course contain a large excess of malt sugar, which in certain cases it is desirable to exclude. The use of the

"Takamine diastase" therefore offers obvious advantages on this head. It can be employed, for example, for the malting of milk preparatory to drying, while it can be introduced almost imperceptibly to the taste into beer and other beverages without adding objectionably to the sugary constituents. It can also be compressed into tablets and in that form be obviously useful for a variety of medical and dietetic purposes. The expense of obtaining diastase by the new process is so small that it will be cheaply available for all purposes, including that of bread-making. It is this product of the new discovery, but in a less concentrated and in a less expensive form, which is expected to take the place of malt to a great extent in breweries and distilleries, while the ferment is calculated to replace the present yeasts of commerce in consequence of its greater power, quicker action, and superior keeping qualities.

As already stated, Taka Koji possesses two distinct properties—namely, diastatic property, or property of converting starch into sugar, and fermenting property. It is exceedingly important from an economical standpoint to separate these two properties, as well from the Taka Koji as from each other—a separation that has never before been successfully accomplished on an economical scale—so that when a conversion is desired the ferment property need not be wasted, and when fermentation is desired only the ferment property of the Taka Koji may be employed without waste of the diastatic property. The ferment portion may be directly separated from the dried Taka Koji, in the form of a fine powder, by sifting the Taka Koji. This powder comprises the bloom of the fungus and possesses fermenting properties in a remarkable degree. The residue left after sifting contains the diastatic property, and may be used as a diastatic agent. These two properties may be extracted together from the Taka Koji by soaking or steeping the same in water, thoroughly stirring and then pressing the mass, the diastatic property dissolving in the water, and the ferment part, insoluble in water, becoming detached by attrition and remaining suspended in the liquid. The soaking or steeping, separating and pressing operations may be repeated as often as may be desired, in order to effect a thorough separation. The ferment may be separated from this solution by decantation or filtration. It is, in the form of a fine dry powder, composed of young, immature spores of the mycelial fungus, the color varying with the different fungi employed. It consists of microscopical spherical cells possessing the property of being transformed into alcoholic ferment cells when submerged in sugar solution under suitable conditions. Fermentation with this "Taka Moto," as it is called, proceeds with remarkable regularity and briskness, the liquid having all the appearance of a weak acidulated solution of sodium bicarbonate, so brisk is the effervescence. On microscopical examination the deposit was seen to consist of budding cells perfectly uniform and regular in shape and like the spores of mucor or some allied fungus, which have pullulated instead of producing a mycelium. Mr. Takamine uses the microscopic fungus *Eurotium oryzæ* with the best results. But other mould fungi belonging to the genus Aspergillus and to the genera Mucor and Penicillium may also be employed. The Moto may be dried and used for all the purposes for which common yeast is at present used. It is claimed that the aspergillus yeast for bread-making will work in half the time required by yeast, and will produce sweeter and more wholesome bread. It is, besides, less liable to become sour, as the Moto itself will keep for almost any length of time in ordinary climates and temperatures. It is further stated that the Moto has the power of mastering all injurious and parasitical ferments it may encounter, and of giving off its ferment cells of a perfectly regular and pure kind.—*The Lancet* (London).

A Review of Pseudo-Medical Science.—We have reared a great science, and are now endeavoring to tear it down with our own hands! Germs surround us everywhere. If we believe that infectious diseases are caused by germs, prophylaxis becomes impracticable. We have plenty of remedies for the relief of disease, but none that will effectively kill germs. A belief in germ infection leads naturally to medical anarchy. We cannot prevent infection, because we cannot get a corner on germs. We cannot relieve the conditions they produce, because, in order to destroy the germs, we must injure the vitality of the tissues.

What shall be done? One mistake entangles us in an intricate web of error. The fad treatment of infectious diseases follows germ pathology as naturally as night follows day. It is an open declaration of the impotence of medical science. It says: We cannot prevent disease, neither can we cure it. We must leave it all to nature.—No, not all, that would leave us without occupation; we cannot afford that. So, without regard to law or logic, the deluded scientists who pro-

mulgated the germ theory have evolved a therapy which can scarce escape a child's penetration.

The reaction will come. "Truth crushed to earth shall rise again." Repeatedly glowing reports from the same source have been heralded throughout this country. And what has become of them? The mortuary statistics of *American* hospitals can tell us something accurate about them—something that will flush the cheek with shame at the rash credulity which eagerly accepted the statements of a few self-constituted authorities and covered its mistakes with gravestones.

Did we never relieve disease before the rise of germs and their so-called antidotes? We did, and a comparison of death statistics will show, allowing for the vast improvement in sanitation, a better percentage then than now. Are we going to give up our tried and trusted friends, the medicines we know all about, which have wrought many cures in our hands and incidentally brought reputation and success, for the foreign pottages that have only the element of novelty to recommend them? Well, hardly! We are going to demonstrate that *experience* has taught us something; that although a young and enthusiastic nation, we are not to be successfully and *continuously* imposed upon. America has been a sort of fairy's-purse for foreign financiers, a favorite field for investments of the bubble nature; but that is *history.—Medical Brief.*

Fruit-eating.—The value of fruit of various kinds in the dietary of the average healthy individual cannot well be overestimated. When it causes indigestion it is usually because it is taken at wrong times, and not because it is necessarily difficult of digestion. The proper time to partake of fruit, whether cooked or raw, is at meals, and not, as is so frequently done, at odd times throughout the day. At this season of the year most persons are the better for restricting the amount of nitrogenous food and indulging in raw fruit and green vegetables. It must not be lost sight of that fresh, uncooked vegetables ought to form a substantial part of our daily food. Cooking, though it may facilitate the digestion of fruit, does so at the expense of the peculiar quality of freshness, the absence of which in the long run gives rise to serious disturbances of nutrition. A belief has gained ground of late years, based on a misconception of certain general statements, that fruit is harmful to persons with a tendency to gout. If it is cooked and sweetened by the addition of cane sugar, no doubt dyspeptic disturbances are likely to occur, but no possible drawback attaches to the use of raw fruit in proper quantities, provided it is ripe. The salts contained in fruits are of the greatest value to the organism and are not obtainable in anything like the amount required from any other source. Children in particular should be encouraged to partake of fruit as part and parcel of their meals, and if proper care be exercised in the selection of a ripe and undamaged article, and in the giving of it at suitable periods, no disturbance of the intestinal functions need be apprehended. In conclusion, it is a generally accepted maxim that fruit and alcohol do not go well together. —*Medical Press and Circular.*

A Constant Sign of Commencing Meningitis.—This consists in the inharmonious movements of the chest and diaphragm. It exists from the beginning, and may serve to reveal its cause even in insidious cases, but requires careful searching. The chest and abdomen must be bared, but not suddenly, or the hyperæsthetic skin will take on accidental movements from the action of the air.

In the first period of meningitis may be seen irregularity of rhythm and inequality of the amplitude or development of the chest. Another sign is the irregular type of respiration and dissonation of the movements of chest and diaphragm. The respiration is effected by the lower respiratory muscles of the chest. Looking at the umbilical region, instead of the normal elevation with each inspiration, there is either immobility or depression. These movements are not connected with the Cheyne-Stokes type of respiration.—*Times and Register.*

Respiration at High Altitudes.—On December 4th last, Doctor A. Berson ascended from Strassfurt, in Prussia, in a balloon inflated with 70,600 feet of hydrogen. At noon, an hour and a half after starting, a height of 22,150 feet was reached, and the temperature was 20° below zero. At this time Doctor Berson began the artificial inhalation of oxygen, with excellent results. About two hours and a half after starting, a height of 31,500 feet was marked, and the thermometer had dropped to 54° below zero. Being alone, Doctor Berson considered it prudent to descend, but he had obtained observations at a greater altitude than ever before. During Mr. Glaisher's ascent in 1862 the last observations were made at 29,000 feet.—*La Nature.*

The Medical Age.

VOL. XIII. DETROIT, JULY 10th, 1895. No. 13.

Original Articles.

ABDOMINAL NEPHRECTOMY, WITH CASE.

BY REUBEN PETERSON, M.D.

Operations for the removal of a kidney are not of such frequent occurrence as to inhibit reports of single cases; for this reason I have thought the following might be of interest:

Miss A. C——, American, aged 22 years; single; house-maid. Family history negative, except that she thinks her father died of some kidney trouble. When eight years of age she fell and sustained an injury to the right side which kept her in bed for two weeks; since then she has always had more or less pain in that side, usually dull (but occasionally so severe as to confine her to bed). As she grew older the pain became more severe and more disabling. She first noticed blood in her urine at the age of nine, and this appearance was of almost daily occurrence thereafter until her eighteenth year, since which time it has been observed only during attacks of pain. About two years ago she had quite a severe seizure in the right side, accompanied by a cessation of menstruation; Doctor Murphy, of Chicago, diagnosed the trouble as cystic disease of the kidney, from a lump situated just at the border of the right ribs. (The patient had noticed this tumor for six years.) Some fluid was drawn off, and an operation advised. After this she was laid-up for some time with severe pain and fever. Next she went to St. Joseph's Hospital, where she was under the care of Doctor Senn, but he could find no evidences of cystic kidney. Then Doctor Henrotin was consulted, who made a vaginal examination and found a cyst of the right ovary, which he removed by cœliotomy; she made a good recovery from the operation, but the pain in the right side still continued, and was so severe in character as to prevent her from working. At times the urine contained considerable blood.

Examination, made September 26th, 1894, gave no evidences of cystic kidney, but there was some tenderness in the right vaginal fornix which was considered to be due to the stump of the excised right tube and ovary; accordingly she was sent to the Butterworth Hospital, and there treated locally with ichthyol tampons for over two months, during which period the urine showed no evidences of any kidney trouble, the amount passed being about normal. She gained in flesh and strength, color and appetite improved, but the pain in the right side still persisted. After consultation with Doctor Eugene Boise it was decided to make an exploratory cœliotomy for the purpose of ascertaining the cause of the suffering—the question of possible chronic appendicitis was considered, as the pain was located in the region of the appendix. It was suspected there was either trouble with the kidney or the appendix, or adhesions from the previous cœliotomy.

Assisted by Doctor Boise, I operated December 3d. An incision was made three inches in length in the right linear semilunaris over the region of the appendix, which was found to be perfectly normal. The stump of the excised right tube and ovary was next examined, and nothing abnormal was found in connection therewith; no ligature was present. A systematic examination of the entire abdominal contents was then made, which resulted in the discovery, beneath the peritoneum and in the region of the right kidney, of a fluctuating tumor. The left kidney was palpated and found to be apparently normal. The peritoneum was cut through over the centre of the tumor until a blue, glistening cyst-wall was disclosed. The tumor was then carefully dissected from its bed, which proved to be a most difficult and delicate task because of the thin wall and the density of adhesions. The kidney was finally cleared in all directions, except the pedicle made up of the ureter and renal vessels. The ureter was isolated and cut midway between the silk ligatures which were applied. One large silk ligature was placed around both artery and vein. Forceps were then placed close to the kidney, and the mass removed. The stump was

dropped and the peritoneum allowed to settle over it, no stitches being used. The abdomen was not irrigated, but little hæmorrhage having taken place. No drainage was used. The parietal peritoneum was sutured with catgut, the fascia with interrupted silkworm-gut sutures, and the muscles with catgut. Catgut was also used for the skin. The patient suffered very little from shock, the operation lasting a little over an hour. She made an uninterrupted recovery. The stitches were removed on the ninth day, and the wound was found to have healed by first intention.

The patient is now free from pain and able to do light work. The urine was examined carefully after the operation. About the normal amount was passed in the twenty-four hours, showing that one kidney was able to do all the work.*

Regarding the diagnosis of cystic disease of the kidney by means of the cystoscope and the use of ureteral catheters: Only since Howard Kelly's work on the bladder and accessories has it been practicable to make use of catheterization of the ureters as a means of diagnosis of disease of the kidney. By means of Kelly's instruments both ureters may easily be catheterized and the excretion from each kidney carefully examined; great additional aid to diagnosis is thus obtained. In the case just considered, there is no question but that passage of a catheter into the right ureter would have shown that no fluid was coming from the corresponding kidney. The amount of fluid excreted from each kidney can be determined, and thus the surgeon can decide as to the advisability of the removal of one when the other is slightly diseased; in short, the diagnosis of surgical disease of the kidney has been placed on a scientific basis, and much more accurate and successful work may be confidently looked for in the future.

The advantages of abdominal over lumbar nephrectomy for such cases as the one reported, are evident. Had the incision been made in the loin, it is doubtful if the dense adhesions could have been separated—certainly not without rupture of the cyst wall, thus materially complicating the operation. With the abdominal incision the field of operation is brought plainly into view and the work of enucleation may be carried on both by sight and touch; and the shock attendant upon opening is offset by the greater rapidity with which the kidney can be removed. Lumbar nephrectomy, even though the peritoneal cavity be not opened, is attended usually by great shock, because of the necessary strain to which the renal vessels are subjected in bringing them into position for ligation—the operator is almost invariably at a disadvantage, no matter how extensive the incision may be. Mynter relates of a recent case that his arm was buried nearly to the elbow in attempts at enucleation. One can thus readily understand the dangers attending the ligation of the renal vessels. One of the chief causes of secondary hæmorrhage is ligation of vessels while on the stretch, and the slipping of the ligature usually proves rapidly fatal—a difficulty that is avoided when ligation is through the abdomen. Again, dissecting-room experience teaches that anomalies in the way of blood-supply to the kidney are by no means uncommon, and these can be seen and provided for better by the abdominal route; the latter method also enables one to carefully palpate the sound kidney before removing the diseased one: for it has happened that a kidney has been removed and the post-mortem revealed the fact that,

**Pathological Report by Doctor J. B. Whinery.*—The kidney at the time of removal had become changed into a fluctuating, lobulated kidney-shaped tumor. The length was six inches, breadth four inches, weight one pound; surface smooth, and no evidences of inflammatory action. On palpation, calculi ranging in size from a grain of sand to a pea or a little larger could be detected scattered through different parts of the tumor. On making an incision into the mass, twelve ounces of brownish-colored liquid escaped, which, however, was not subjected to chemical or microscopical examination because the tumor had been in preserving fluid for some time and more or less osmosis had taken place. Most of the kidney structure had disappeared, and there remained only pouches separated from each other by septa of fibrous tissue, in which free calculi were found, about two dozen in all, some of a dark clay-colored appearance, others dark brown; a thin crust of crystals covered a few of the calculi. Firmly imbedded in the mouth of the ureter was a dark-brown calculus the size of a hazelnut, completely occluding the lumen and preventing the passage of urine. Of the kidney structure, only a small portion, varying in thickness from a mere shell to three-quarters of an inch, was left. Microscopical examination of this remaining kidney structure revealed atrophy and a functionless condition of the secretory elements.

although diseased, it was the only renal organ present. The possibility of such accidents should be continually borne in mind and carefully guarded against.

Shall the cut edges of the posterior peritoneum covering the tumor be sutured? If the kidney be in its proper position, removal will leave a large hollow into which the edges of the peritoneum drop in such a way that union readily takes place; the raw surfaces left after peeling out the kidney (which is usually adherent) are covered by the peritoneum, and thus the abdominal cavity is shut off from the retroperitoneal space. And yet, while sutures can be dispensed with in some instances and no unfavorable symptoms supervene, in other cases if there is no great amount of shock and the peritoneum not too redundant I would certainly unite the peritoneal edges by a running catgut stitch, feeling that by so doing I had left the peritoneum in a more favorable position for speedy union than by any other method.

Drainage, as a rule, should be employed only when absolutely necessary. As applied to nephrectomy it differs from other abdominal cases in the fact that the retroperitoneal space may be drained through the loin, while the abdominal cavity can at the same time be closed without drainage; and this would seem to be the most satisfactory method to employ. Gauze is in the main preferable to rubber tubing, owing to the tendency of the latter to collapse and thus prove worthless.

In disposing of the ureter, two ligatures should be applied and severance made between them; stitching the end of the ureter into the abdominal wound, as is the custom of some, is totally unnecessary. If the contents of the ureter are believed to be septic, the end should be cauterized; otherwise it is simply dropped after ligation and excision.

I have wondered whether the history of the injury to the right side in the case just reported could have had any influence in the production of the calculi and the subsequent development of the hydronephrosis; certainly a blow may produce a blood clot within the kidney, from which a calculus can subsequently develop.

The history of paroxysms of pain, and of hæmorrhages from the bladder, would lead to the conclusion that these were induced by frequent passages of calculi along the ureter, and that finally one larger than the rest lodged in the mouth of the ureter, when hydronephrosis resulted.

In conclusion let me say that this case has taught me a valuable lesson: it is, to place more credence in the patient's statement in regard to pain, and if it be located in the abdomen, and the position be constant, to make an exploratory incision to clear up the diagnosis.

Grand Rapids, Mich.

THE NEURO-MOTORY DISTURBANCES OF THE LARYNX.

BY DR. P. RAUGÉ.

The term "neuro-motory disturbances" has been applied exclusively to the functional disorders which attack the larynx through the agency of its nervous apparatus, the organ itself presenting no material lesion. This definition excludes all the motory perturbations springing from a primitive affection of the muscles; from an articular lesion; from one of those mechanical obstacles to the functions of the glottis interposed by congestion of the mucous membrane, the presence of a tumor, or the thickening of a cartilage. With these limitations and exclusions, all motory disturbances of nervous origin, whatever be their nature or cause, may be brought into the following category.

The nervous apparatus of the larynx may undergo at some one point in its course an alteration of its own tissue (traumatism, inflammation, sclerosis, relaxation, hæmorrhage), or, what is more common, may react to an adjacent lesion (aneurysm of the aorta, cancer of the œsophagus, goitre, adenopathia). But be it primitive or secondary, attacking the conductors or the centres, this alteration of the nervous apparatus is expressed functionally by a disorder of innervation, which becomes exaggerated or perverted, lessened or entirely suppressed, according as the original lesion is irritating or destructive, partial or total. Muscular disturbance results, marked by excess or deficiency, and manifested, according to the case, by spasm or contraction —the paresis or paralysis of a muscle or of a group of muscles, or of all the muscles of the

larynx. This perversion of motory function produces deformation of the glottic orifice, which by its changes of aspect, dimension or mobility indicates the seat and the nature of the muscular disturbance.

But the mechanical disorder is not alone evidenced by an anomaly of the glottis (which must be in a manner divined, and which would be discovered only by chance if there were nothing to reveal its traces): it is most commonly revealed externally by apparent manifestations which involve the larynx at times in its vocal function, at times in its respiratory function, and at times concurrently in both. These functional disturbances are the final culmination of the original nervous lesion; they are its symptomatic expression, just as the glottic deformation is its mechanical expression.

Such is the invariable succession of symptoms in every neuro-motory affection of the larynx, establishing a continuous chain between the form of the symptom and the seat of the lesion; and an attentive analysis of the links of this chain renders possible more or less certainty up to the point of ætiological diagnosis. This series of symptoms which I have just followed in their natural direction and normal physiological order, the clinician likewise traces, but *per contra* he proceeds from the apparent symptom to the causative and invisible lesion. For example: A vocal or respiratory disturbance first attracts attention to the laryngeal apparatus. Examination reveals deformity of the glottis, the appearance of which evidences to the practiced eye the muscle or muscles involved, but nothing further as yet. Then must follow a physiological analysis, with nervous localization; and by taking into careful account the muscle or muscles involved and the manner in which they are attacked, ground may be found for suspecting whence comes the causative lesion, although, be it clearly understood, there is no absolute relation between the seat of the muscular trouble and the seat of the nervous lesion.

This series of progressive steps made when analyzing an isolated case in the clinic, represents faithfully the course and summarizes the entire history of the discussions which have centred about laryngeal motor troubles during the past twenty years. Prior to the laryngoscope, all that could be done was to base on an analysis of the external symptoms a diagnosis which was little in advance of the classical distinction between vocal paralyses and respiratory paralyses. After Garcia's discovery rendered it possible to study at leisure the thousand shades of glottic deformation, it became a simple matter, comparatively, to establish, in accordance with these variations, an interminable series of forms based solely on a rigorous analysis of muscular alteration; but despite its subtlety, this purely mechanical study could not be of any service in establishing a primitive nervous lesion. Only of late years has attention been diverted from the symptom to the cause, and to an interrogation of the normal function of the nervous apparatus and its morbid alterations.

In all the animated discussions with respect to laryngeal neuro-pathology, the great guide is pathological anatomy and nervous physiology. The wide bearings of the subject compel me to confine myself to that phase which is at once the most novel and the least known—the anatomy and pathological physiology of the nervous laryngomotory affections; and I shall rapidly sketch the route of the motory nerves of the larynx from their nuclei of origin to their terminal branches, dividing my sketch for the sake of clearness into three divisions: The centres, the roots, and the trunks. Each of these departments has a corresponding problem in the neuro-pathology of the larynx, viz.: The question of the cortical centre: Participation of the spinal in the laryngeal innervation: Pathogeny of the permanent adduction (paralysis of the abductors).

It is impossible to grasp the question of the centres of the larynx, and the general mechanism of its motory innervation, without at the outset establishing the two different and antagonistic functions which the muscles of the organ alternately fulfill. The first of these functions is wholly organic, and maintains the vocal cords in a state of active retraction corresponding to the needs of respiration; the other is a voluntary act which assures during phonation the contraction of the glottis and regulates tension of its lips. — The failure to recognize this very

simple distinction caused the long and stubborn search in the medulla oblongata for a centre embracing all the modes of laryngeal activity. It is certain that the reflex which assures the opening of the glottis during silent respiration has its seat in the bulbar nuclei and escapes voluntary control. But the other function of the larynx—that which renders this organ the most perfect and the most complicated of musical instruments—must perforce derive its nervous influence from a more elevated region of the encephalon. The control of the glottis during singing, and the part played by the larynx in the articulated word, are acts too superior and too eminently psychical to permit of a doubt of their cortical representation. There is even no good explanation why this laryngomotory centre has so long been refused a place in the cerebral cortex, while the centres controlling the muscles of the face and members were so freely accorded this distinction.

When Ferrier and Duret sought this functional locality in the cortical substance, they were not bent on determining simply a focus whence was directed the vocal adaptation of the glottis—that is to say, a simple element in the complex phenomenon of phonation. What they thought they could find was the centre of the voice, meaning a point in the cortex the excitation of which might suffice for bringing into play the multiple powers concurring in this choral act. It seemed to them that by compressing certain points in the cortical surface of a dog it was possible at once to provoke the complete phenomenon of barking, thus setting in motion at one stroke not only the muscles of the glottis, but all the other mechanical elements and in part the expiratory contractions which must necessarily be associated to produce this sonorous phenomenon.

Put in this form, the problem was naturally insoluble. To Krause is due the merit of circumscribing the question, and seeking, not the centre of the voice, which is a very complex act, but the centre of glottic adduction, which is an eminently simple act. To follow the movements of the cords in the animals under experiment, M. Krause first resorted to laryngoscopical examination with the mirror, then the opening of the laryngeal cavity by pharyngotomy. He finally hit upon a more simple process, which consists in drawing the larynx before the soft palate by traction of the tongue and epiglottis, the latter being seized by means of a dissecting-hook or cord. As a result he was able to determine in the dog a focus, the excitation of which produces in a constant manner adduction and —mark well this fact!—*bilateral* adduction of the cords. This focus is situated in the anterior branch of that U-convolution which embraces the crucial furrow in its superior concavity and which is designated in all the mammiferous animals by the name of sigmoid gyrus. This anterior branch of the sigmoid gyrus, which Krause, following the nomenclature of Owen, calls the præfrontal gyrus, is more familiar under the name of præcrucial gyrus. The exact seat of the adductory focus is in the lower part of this præcrucial gyrus, at the level of the contracted bridge which forms a species of isthmus between the præcrucial gyrus and the anterior gyrus.

Seven years later the essential results of these experiments were confirmed by Semon and Horsley by tests made not only on the dog and cat, but on divers varieties of the monkey—the animal species whose cerebral topography approaches nearest that of man. In the brain of carniverous animals they also located with precision the centre of bilateral adduction at the junction of the præcrucial gyrus with the anterior and coronal convolutions; but they discovered further that the motory action of adduction was greatest at the level of the focus, extending in decreasing power through the lower two-thirds of the præcrucial gyrus and below in the upper extremity of the anterior gyrus. It was reserved for M. Masini to accentuate still further this species of diffusion of the primitive laryngeal focus, and to extend it not only at its surface to the greater part of the motor brain, but also in its depths at the site of the white subcortical substance.

But the truly original part of Semon and Horsley's discoveries was the localization of the laryngeal centre of the monkey, permitting by a legitimate analogy the establishment of its probable situation in man. The Rolandic region of the *macaque* presents before Roland's groove an ascending frontal convolution which does not differ appreciably

from that of the human brain. At the base of this convolution, at the level of its junction with the third frontal, Messrs. Semon and Horsley have been able to fix the place of the phonatory laryngeal centre. This centre they claim has two limits: forward, the præcentral furrow (præ-Rolandic furrow); below, the fissure of Sylvius; behind, a little furrow without name which rises vertically from the fissure of Sylvius and divides almost exactly into two parts, following its vertical axis, the foot of the ascending frontal; above, a horizontal line passing through the upper extremity of the preceding furrow.

As far as one is justified in drawing conclusions from experiments on animals, it seems that in man there must exist in the neighborhood of Broca's region a zone of the motory brain presiding over the adduction of the cords, that is, their phonatory activity; and this also has been established by Krause, Semon, Horsley, Masini, Onodi, and others. But in that event how explain the fact that this psycho-motory centre has never revealed its presence in man by the pathological disturbances which must follow its lesions? If there exist a laryngeal centre, as there exists a language centre or a motory centre of the members, how are we to explain the fact that we do not encounter clinical aphonias of cortical origin, or hemiplegias of the glottis—similar to the motory aphasias or the cortical hemiplegias of the members? Situated, like motory centres, in the territory irrigated by a branch of the Sylvius (ascending frontal artery), the laryngo-motory centre should not logically escape more than any other the pathological lesions consecutive upon rupture or obliteration of this branch. Yet on examining, several hours after apoplectic ictus, a large number of subjects suffering from aphasia or from hemiplegia of the members, M. Semon did not observe a single case in which the motility of the larynx seemed at all compromised.

To explain this contradiction between experimental theory and clinical results, M. Semon appealed to a detail in the experiments which I purposely emphasized—the bilaterality of the movements produced in the larynx by excitation of a single hemisphere. This fact indicated to him that the psycho-motory direction of the glottis is not, like that of the members, divided symmetrically between two centres, the right and left, the action of which, unilateral and crossed, is exerted individually on each half of the organ. It seems that the vocal cords, acting always in concert, do not need to have each its independent motory centre, and their union represents an undivided system acting bilaterally and in a mass through a single cortical centre. And as this bilateral action belongs indifferently to each of the two hemispheres, the result is that the function is doubly assured. If one of the centres disappears, the surviving centre is equal to the task; or, speaking clinically, the lesion of one of the laryngeal centres is necessarily a lesion without symptoms, since it is always a compensated lesion.

Semon and Horsley support this affirmation by a striking experimental proof. On the one hand they destroyed in the animal the region of the laryngeal centre—nay, more, they completely removed a cerebral hemisphere—and, despite this mutilation, observed a persistence in the normal movements of the glottis; even the vocal cord opposed to the hemisphere removed failed to present the least appearance of paralysis, and electric excitation of the surviving laryngeal centre continued to produce bilateral adduction of the cords as in the unmutilated subject.

Hence hemiplegia of the larynx is absolutely impossible. Either one centre is attacked and its lesion remains mute; or the two centres are destroyed, when there is no longer a hemiplegia but total paralysis which may be observed at the level of the glottis.

Aside from this doctrine, which denies even the possibility of laryngeal hemiplegia, I proposed two years ago a less brilliant hypothesis of the incontestable clinical rarity of such observations; I thought, and still think, that if hemiplegia of the larynx so seldom accompanies asphasia or hemiplegia of the members, it is because it is seldom sought for in the clinics of general medicine, and because most of those who show the cerebral lesions which produce it fail to present themselves to the mirror of the laryngologist. There now exist a certain number of authentic cases in which laryngeal hemiplegia, duly established during life by laryngoscopical examination, could only be explained at the autopsy

by a lesion of the laryngeal centre or of the intra-cerebral fibres which it thrusts out toward the bulbar foci.

I am aware that M. Semon persistently admits the probability of an unknown bulbar lesion which is to be regarded as the veritable origin of the pretended cortical paralysis. This stubborn skepticism in the face of the most serious observations proves only the imperturbable fidelity of M. Semon to his experimental convictions, despite the opposing evidence of the clinic.

The affirmations of the clinicians are further supported by physiology. Thus, M. Masini, by bringing very feeble currents to bear on the cortical surface at the level of one of Krause's regions, observed that the glottic contractions became limited to, or at the very least predominated in, the opposite vocal cord. In a series of more recent experiments the same author found that an application of cocaine or an injection of this substance at the level of the laryngeal centre determined the crossed paresis of a single vocal cord. We all remember the solemn challenge provoked by the publication of these results, and the open letter in which MM. Semon and Horsley invited M. Masini to repeat his experiments before the Section of Laryngology of the International Congress at Rome. The Italian author accepted the challenge, but it is only just to admit that the attempts at demonstration, in which I assisted, were not particularly convincing at that time.

When we read of a case of cortical laryngeal paralysis we may be almost certain of finding the statement that one of the two vocal cords is fixed "in the cadaveric position." In this simple phrase is a physiological heresy on which it is needless to dwell. I have already stated that the larynx fulfills a double function—the vocal and the respiratory—and it is the first alone which is represented in the cortical layer. The first function, therefore, and the first alone, can be involved or destroyed by a cortical lesion, without this lesion attacking in the least the respiratory function, which has its origin in the bulb; and so true is this that we may, as Semon actually did, remove the two cortical centres, and even remove "the entire brain including the internal capsule as far as the lamina of the fourth ventricle," without causing any injury to the respiratory function of the larynx. Now, the same must be true of a case of pathological lesion in man, and a cortical paralysis must be by definition not a complete paralysis but a vocal paralysis, with absolute conservation of the *tonus dilatateur* which represents in the activity of the larynx the purely organic side and responds to bulbar innervation. Hence the state of a vocal cord attacked by a lesion of the cortical layer should not in any case be that state of inertia producing the cadaveric position; on the contrary, it is a state of abduction which is nothing else than the respiratory position, and it is abnormal only in that it has become persistent, and that the cord, deprived of its adductory centre, remains in permanent subjection to the abductory action of the bulb, without being ever again able to approach the median line. The practical consequence is that the glottic deformations produced by the cortical lesions remain completely masked during silent respiration; they appear only at the moment when the patient makes a vocal effort, and when the paralyzed cord, refusing to lend itself to the movement of adduction, rests obstinately fixed in the attitude of abduction, or the respiratory phase. It is true that the healthy cord, exaggerating its normal excursion, seeks to approach its impotent congener and disguises in a measure the excess of the latter's deviation. This doubtless explains the laryngoscopical illusions which cause us almost always to estimate this deviation at more than its real value, and to speak of cadaveric position when in reality the case is simply one of extreme abduction.

(*To be continued.*)

TREATMENT OF INTERMITTENT FEVERS AND PERIODIC NEURALGIAS BY APIOL.

BY DOCTOR C. DUCLOS.

Since apiol was heralded by MM. Joret and Homolle as a succedaneum for quinine, many experiments have been made to determine definitely the antiperiodic value of the drug, and (as stated by Professor Bouchardat in *Annuaire de Thérapeutique*) it has been demonstrated capable of at least supplementing quinine, if not actually replacing it.

In order to verify the conclusions of Joret, Homolle, and Bouchardat, a practitioner was sought whose labor lay in a region where intermittent fever was endemic, and that also permitted ready communication with Paris, where supplies of apiol could be had. These two desiderata being secured, I profited by the fact to collate records of all the cases occurring for two years in this district, with the express view of personally drawing therefrom more exact conclusions as to the antiperiodic value of apiol. My observations, though perhaps possessed of little merit other than as a means of calling renewed attention to the active principle of parsley seed (thus repeating the evidence contained in the 137 cases outlined in the memoir of Joret and Homolle), may nevertheless be of interest from the fact they were gathered without prejudgment and with the sole desire of determining positively the therapeutic value of the medicament.

The cases are separated into two classes: those embracing intermittent neuralgias, ague-face, *tic*, etc., etc.; and intermittent and larval fevers proper, including fevers of extremely rebellious character.

I may at the outset anticipate the conclusions by stating that in intermittent neuralgias apiol seems to secure most marvellous results; but, on the other hand, in larval forms, especially when of a rebellious type, and in ordinary intermittents, its therapeutic action is much more limited. Further, I may be permitted to state (verifying the utterances of the authors of the memoir cited) that "Apiol, while it cannot be employed to the same advantage as quinine in combating grave intermittents, may well be substituted for the latter in the ordinary acute forms"—in the former, quinine certainly has proved more powerful and more satisfactory than apiol.

Case 1.—M. C——, aged 9 years; tendency to lymphatic temperament; discolored mucous membrane; cardiac palpitations; souffle in the vessels of throat; pale tint of complexion, and visage somewhat puffed, as in chlorosis. Resides at Esches, a little village in the Canton Meru, situate half a league from a marsh where cresses are cultivated. Early in August this child was seized with violent neuralgia in both ears, along with darting spasms in temples and posterior occiput, that returned in crises with violent shocks (chills) which caused her to give utterance to evidences of excruciating pain. At the outset the pains were most acute during the daytime, at night scarcely disturbing sleep or health; but they soon began to assert themselves in the morning in the form of mild twinges in the temples that became augmented through the day, finally culminating at about 8 P.M. in most intense agony; they would then steadily decrease through the night, only to reappear the following day at about the same hour and with the same characteristics. From a slight twinge at the base of the ear the patient was able to determine the reappearance of the pain, which was augmented by speaking, eating, etc.

During the first fifteen days, as there was no loss of appetite and sleep, and moreover no evidence of swelling or redness in the afflicted parts, it was not thought necessary to consult a physician. When the otalgia had persisted some three weeks, swelling of the parotids took place; the pain also became more and more violent, and the crises recurred as frequently as twenty times daily, and, instead of lasting merely a few minutes, were prolonged for a quarter and sometimes half an hour; at this period too, about 8 P.M. an exacerbation appeared, marked by general chill that was followed by a decided fever, perspiration, and insatiable thirst. Thus, when the neuralgia had assumed its greatest intensity and the patient could no longer secure sleep, I was consulted.

August 27th, leeches were applied below each swollen parotid, and, as soon as they had fallen off, three capsules of apiol, of three minims each, were administered. The same evening the neuralgia disappeared as by enchantment. The following day three more doses of apiol were given, with the result that in a few days the parotids were free from swelling.

A year later (June 22d), as a result of cold feet, the same girl was seized with a similar attack of otalgia, though the crises were not so severe or so prolonged as on the former occasion—they returned only about ten times a day and lasted not more than a quarter of an hour each time. The most severe paroxysm, as before, was manifested at 8 P.M., and the entire night was passed in such suffering that sleep was impossible; the patient was warned of each recurrence of pain in the temples and occiput, by a slight shock at the base of the ear; but this time the parotids were not swollen and there was no febrile movement during the crises other than as manifested by insatiable thirst.

The rapidity with which relief was afforded in the first instance led the parents to summon medical aid almost at once—when the malady had prevailed but four days. Exactly the same treatment was formulated, viz., leeches below the ears, and for two successive days three capsules of apiol five hours before the chief crisis. The evening the first doses were administered the otalgia entirely disappeared; indeed, the patient fell into a profound sleep, breathing much more heavily than was her wont. She awoke after nine hours' rest—rest that had been denied her for four nights owing to suffering. The following day she vomited and evinced some nausea along with eructations strongly flavored with the pungent odor and taste of apiol. Appetite very good. Pulse 60; respiration 20. The next day she appeared so well that the three apiol capsules ordered were not given, but the following night she was not nearly so comfortable, there being little sleep, though the pain was not marked. The following day the apiol was resumed, and from that time health remained perfect. Every time the parents, who come to me occasionally, speak of the child, they express their astonishment at the rapidity of the cure.

Case 2.—M. D——, aged 68, a resident of Gicora, came to me on the 12th of July. He was a man of large stature, and presented all the characteristics of the nervous temperament; for three weeks he had suffered from neuralgia in the entire right side of face, characterized by intense pain in the brow, cheek, upper jaw, and globe of eye; pressure at the opening of the suborbicular foramen was very painful; at times there were twinges and darting spasms which greatly distressed the patient by their violence—often the pains prevented eating, sleeping, speaking, blowing of nose, and even movements of the head. This day, having traveled during the morning in an open carriage against a very cold wind, the suffering was so intense as to be almost unbearable; the crises of pain recurred every five or ten minutes. He first desired to have drawn the large molar of his upper jaw, the only tooth remaining to him on the right side, believing it the cause of the neuralgia; but as the tooth was sound, I refused. Instead, four leeches were applied under the angle of the jaw; and when these fell off, six capsules of apiol were ordered in a single dose. Almost immediately, as in the former case, the pains were subdued as by magic, and the following day found the patient radiant, having slept well, and anxious to thank me for so rapid and marvellous a cure. At the end of fifteen days the neuralgia had not reappeared, and he returned home.

Case 3.—E——, a boy aged 10, living at Esches—the village already referred to as being the spot where intermittent fevers are endemic; very scrofulous; had sore eyes for a period of six consecutive months. In March he was, without known cause, seized with violent pain in right ear, the same recurring in intermittent crises from time to time during the day, but assuming an especially atrocious and agonizing character at night. In the morning suffering became somewhat abated, only to return again with great violence and increased intensity the succeeding evening at eight or nine o'clock. This had been the condition for three days when I was summoned.

The crises were so sudden and so excruciating the night before that the child became fairly insane with pain, declaring each moment he was about to die. Leeches were ordered below the ear, and capsules of apiol to be administered three each evening during two consecutive days. After taking the first three capsules, the pain subsided as by enchantment; and although an abscess had formed in the right ear, and had not yet discharged, it gave little trouble, and evacuated itself the second night after the patient had ingested three more capsules. After the leeches and the apiol, sleep became excellent; nevertheless, at the end of two days a second abscess supervened in the opposite ear, which however was almost painless. The suppuration in both ears lasted about eight days, and finally terminated under the employment of instillations, drop by drop, of tincture of iodine, three times daily. The mother assured me the capsules of apiol arrested the pain.

Case 4.—L——, aged 30, a farm servant at C——, a little village containing many pools of stagnant water, and in which numerous cases of intermittent fever occur every spring. After having traveled in an open carriage in a very cold wind, she was seized, on the 28th of March, with trifacial neuralgia occupying the entire right side of the head; during the morning and the entire day the pain was endurable, but, beginning at the hour of rising, it augmented until evening, when it became intolerable and agonizing. There were twinges and twitches in the brow, cheek, and upper jaw, and during the severest crises pressure at the level of the suborbicular orifice was very painful.

Four leeches were applied below the right

ear, and during two successive days six capsules of apiol were given each day. On the 31st of March the pain was considerably diminished in intensity, though still predominant in the evening; at night it was better and sleep much more calm. The apiol, however, was very repugnant to the patient, producing nausea, eructations, and a considerable loss of appetite during three consecutive days. Though it did not completely overcome the neuralgia, there was marked improvement; and when tincture of iodine in three-drop doses was instilled into the ear of the affected side, relief became complete.

Case 5.—Josephine M——, aged 32, a peasant laborer; for seven years she had been subject to daily accesses of intermittent fever, which returned more particularly at the changes of the seasons. Early in November she experienced great fatigue during harvest, and had already suffered during six weeks from sciatic neuralgia of the left side. Every year at this epoch she suffered from pain in left lower leg, which, however, was ordinarily less violent and of shorter duration than at the time when I was called. Nine years previously she had the same malady, when twelve leeches applied to the popliteal space gave relief for several days. When summoned I found the patient could walk very well until about eleven o'clock or near noon; then the pain began at the back of the foot with twitches and twinges, mounting to the back of the calf, the thigh, and the hip, stopping at the loins. Little by little the suffering increased as the day advanced, until in the evening she either limped with difficulty or could not walk at all—could not even undress without aid. Occasionally slight erratic chills were observed in the diseased limb, and during the first eight days there was œdema about the left instep. The pain was so severe for the seven or eight nights previous to my seeing her that she was hardly able to secure two hours' sleep at night; she was continually moving the leg in order to find for it at one time a cool place and at another time a warm one. The menses returned soon after the commencement of the malady, but did not subdue the erratic neuralgia. One day the pain was very severe, the next it subsided, proceeding in the regular manner of tertian larval fever.

During the first eight days I had her take eight grains of quinine; but this failed to in any way mitigate the intensity of the malady. I next applied twelve leeches to the popliteal space; then resorted to general venesection; finally made application of cups; all without satisfactory results. Later, for two consecutive days sixty centigrammes of quinine were taken daily, yet the pain showed no diminution. On the 12th and 13th of November I administered daily six capsules of apiol, at the same time prescribing for ten consecutive days one centigramme of muriate of morphine to be placed on the dermis over the sciatic nerve previously denuded by vesication.

From that time the improvement was noticeable, but it was a question whether it was most due to the morphine or to the apiol. On the 14th of November, only three of the morphine powders had been absorbed, still the improvement was surprisingly noticeable; thus, a half-hour after the application of the first vesicatory the pain subsided, but the patient had likewise taken six capsules of apiol. The succeeding day the pain continued to diminish, and so on until the third, when it entirely disappeared. She slept very well during two nights, though on the third there was a feeling of stupor and severe headache as though a band of iron encompassed the brow, likewise slight ringing in the ears succeeded by a very clamorous appetite. She believed her relief was due solely to the serum removed by means of the blisters; nevertheless, fifteen days before she had applied one which had taken away very much more serum and yet afforded no relief at all, and I therefore naturally inferred the benefit was due chiefly if not solely to the apiol.

From the 15th of November up to the 21st of December she arose every day without suffering or limping, though at the latter date the blisters on the leg were suppurating abundantly and the foot was very œdematous. On the 27th there had been no return of sciatic pain; nevertheless the patient was directed to take six baths of aromatic vapor, and to wrap the thigh with a band of flannel covered with sulphur.

Case 8.—M. L——, aged 30; peasant laborer at C——; possessed a very strong constitution and sanguino-plethoric temperament; in childhood was often subject to epistaxis and angina; at the age of 14 had typhoid fever which lasted six weeks; has always been regular, and the menses ordinarily very abundant, lasting four or five days; married at 22, and has four children; her pregnancies proceeded very well, save that she vomited during the entire period; all confinements normal.

Fifteen days after her last confinement she took a bottle of black draught and coffee-grounds to induce a flow of milk. On the same day of this purgation, which doubtless

was somewhat too free, she was suddenly seized with a singular malady, which lasted eleven months, when I was called, October 4th.

This malady recurred in crises, during which there was atrocious pain radiating to the side and right hypochondrium, and at times to the right shoulder. During these crises of suffering, which drew from the patient plaintive cries, the face was distorted and the voice profoundly modified; she complained also of feeling as if something obstructed the stomach. After lasting one or two hours, the crises were terminated by an eructation of gas, which always relieved. At first the crises returned five or six times daily during two consecutive days; then did not ensue oftener than every three or four days; later on, made their appearance every eight days; after some considerable period of time the interval became fifteen days. In the intervals between the crises—a fact which always gave much surprise—her health appeared as good as at any time before confinement. She often compared these crises to violent toothache or to the most severe pains of childbirth, as they were wholly in abeyance at some moments, only to resume their violence after a brief period of rest. During the first days in the month of February following, a violent neuralgia asserted itself in both eyebrows, apparently secondary to or resultant upon an attack of gastralgia, and radiating into the jaws and all the teeth, returning in periodic attacks in the same way as that in the epigastric region. These attacks would confine the patient to bed for two or three days; sleep was bad, and she was harassed with anxiety and hallucinations. In the morning following, the urine was always turbid. At times there was no attack during the day; often it occurred in the evening; almost always at some hour in the early part of the night. The crisis returned at a moment when the patient expected it the least, and there was apparently no one ailment more potent in causing its return than another. On one occasion, however, he observed that after taking some honey-water as a laxative she had indigestion, and that the gastric neuralgia supervened upon the latter. There was never any evidence of chills or perspiration during the crises, and they were always followed by stubborn constipation; indeed, the constipation was the principal symptom aside from the pain which absorbed attention; and the patient was in the habit of declaring that if she could only secure perfect regularity of the bowels she would be relieved. She frequently also insisted that the most severe attacks supervened upon the cessation of the menses. The urethra was intensely congested at its external orifice, and was several times cauterized with nitrate of silver. During the menstrual epochs there was always lumbar pain, more severe at night than during the day.

After five or six months of suffering, her health began to fail; the complexion became yellow and earthy; there was less and less appetite; strength gradually gave way; digestion became painful, long, and laborious, being accompanied with epigastric distress after each repast. Finally there was profound emaciation, and her weight had decreased from 124 to 103 pounds. There were likewise cardiac palpitations, and panting in walking; all labor became impossible; she fell into a condition of melancholy, sadness, and indefinable discouragement. The menstrual epochs returned very regularly, but the blood was black, viscous, tarry, analogous to that observed in pyrexia, and the flow was much less abundant than formerly.

She had resorted to a large number of physicians and quacks, and no form of treatment had prevented a recurrence of the attacks, which at the time I was called had persisted for eleven months; iron, anti-spasmodics, anti-dyspeptics, sedatives, had been resorted to without avail. After careful examination I could detect no evidence of organic affection of the liver or stomach; there had never been any icterus or evidence of epigastric tumor; there was no cancerous cachexia, and no trace of such in the family of the patient, whose father and mother were still perfectly well though very aged. At the time I was called (October 4th) she was suffering a very intense gastralgic crisis, and there had been considerable dysmenorrhœa during the evening, beginning at nightfall; respiration 32; temperature 104°; pulse hard, frequent, 100. This crisis was preceded two days before by a general chill, followed by hot flashes and abundant perspiration. The tongue was saburral, bitter; there was dysmenorrhœa and constipation; the urine in the morning turbid; great weakness of limbs; on defining the outlines of the liver it was found to encroach by the breadth of two fingers upon the costal and epigastric spaces, and moreover was exceedingly sensitive to percussion; the mammæ were swollen, the nipples presenting a red border and bleeding upon touch; there was frequent belching of gas, with a sensation of suffering and likewise excessive hunger.

After careful deliberation I diagnosed the case as one of masked intermittent fever, or, rather, one of those larval forms with con-

gestion of the liver asserting itself in an intermittent manner during the gastralgic crises; notably there was an absence of absolute fever, the attacks recurring periodically, though at the time I was called the attack had been well marked by elevation of temperature. This attack, too, was one of the most violent the patient had ever suffered, and supervened on the termination of the menses. The morning pulse was 72; respiration 34; axillary temperature 95°. After fifteen days there was a slight febrile attack, very often accompanied with night-sweats, hallucinations, and a feeling of anxiety.

Preliminary to other treatment a dozen leeches were applied to the region of the liver, and thirty centigrammes of quinine ordered daily for ten days. Cataplasms with laudanum were applied, also mercurial inunctions at the epigastrium; bouillon and wine daily. On the 24th of October a diminution in the volume of the liver was noticeable, and the gastric crises had little by little diminished, the patient thereby being very much relieved. From the 24th to the 30th the malady returned as violent as before, with the sole difference that it now presented the characteristic of a quaternian fever, the patient having two good days between the attacks. On the 29th wet cupping at the loins was resorted to; the blood was still black, viscous, and pitchy. The epigastric pains were subdued by means of opiates, ether-perles, and fluid extracts of opium and belladonna. The menses returned the day following the application of the cups, when the pain subsided.

From the 1st to the 11th of November, almost complete comfort was experienced, the patient manifesting only a little gastric eructation after meals, with slight palpitation; appetite and sleep considerably better. For the three weeks succeeding she took morning and evening a wineglass of quinine wine and a ptisan of lesser centaury in Malaga; to these were added cold douches at the region of the liver, which seemed still enlarged, and a general cold affusion every quarter of an hour every second day. After the first douche she contracted a cold with mild bronchitis and violent toothache, when the gastralgia was resumed with great violence, the crises occurring every evening at eight o'clock. There was dyspnœa, pain in the epigastrium, back, and right hypochondrium, accompanied with very bad nights, exhausting dreams, sensation of hunger; turbid urine in the morning. The crises lasted three hours every day. On the 19th of November venesection was resorted to and sixty centigrammes of quinine were ordered for each of the two succeeding days; the douches were suspended. The blood at this time was not blacker, but very buffy; the crises were not at all modified. Wet cups were applied to the epigastrium on the 21st of November, and sixty centigrammes of quinine daily continued; nevertheless the crises were of considerable severity up to the 25th, when without known cause there ensued a terrible attack accompanied with profound alteration of the features and pronounced febrile movement, the temperature rising to 104°; pulse 96.

Venesection was again resorted to, and a full gramme of muriate of quinine given daily. December 10th, after fifteen days of comparative comfort, the crises appeared again, lasting two days, but were soon mitigated by wet cupping at the epigastrium and the ingestion of one gramme of quinine muriate during two days. The patient, who during this time had not discontinued for a moment, in the intervals of the attacks, a tonic and ferruginous treatment, managed to regain something of her vigor and appetite. Strength and sleep were improved; she did not now suffer except immediately during the attacks, and her countenance resumed its wonted expression as soon as she was able to eat. The last appearance of the menses had anticipated itself by fifteen days, and the blood was better-colored than previously; it was less black, less pitchy, less diffluent; the flow began on the 29th of November.

For a whole week previous to December 25th there were slight crises every other day. The patient took each morning a tablespoonful of magnesia to overcome the constipation, thereby securing two or three liquid stools every twenty-four hours. On the 21st of the month, during a severe attack, six leeches were of necessity applied to the vulva on account of the lumbar pains and for the purpose of inducing the menstrual flux. There was prolonged syncope. January 8th the menses had been suppressed for six weeks, and few days had elapsed without some manifestations of her old trouble. On the 6th and 7th the pains returned as violently as on the 21st of December. An attempt was made to relieve by substituting apiol for quinine; at the same time wet cups were applied to the epigastrium. During four consecutive days six capsules of apiol (each three minims) were administered, or twenty-four capsules in all. Sleep became better during the nights that followed, and appetite in the morning was greatly improved; the attacks were slightly modified by perles of ether, much more so than by quinine.

On the 10th of January the gastralgia had entirely disappeared. There was not the slightest crisis, but on the 12th and 13th the

suffering reappeared, requiring the use of morphine, which was applied endermically by means of vesicatories over the epigastrium. On the 19th another tolerably severe crisis ensued, that was relieved by bleeding and by the administration for two consecutive days of apiol in doses of four minims. The blood was no longer dark or pitchy. From that moment there was no return of the attacks, and the iron tonics were continued with great perseverance. Little by little digestion improved, the countenance resumed its freshness, the pulse was invigorated, the souffle in the vessels disappeared, the sleep became sound, the urine clear, and the strength improved. The periods became regular, and the blood of natural color the same as before the onslaught of the malady. The succeeding months of February, March and April were passed in excellent health, and since that time she has had no relapse, though occasionally she resorts to preparations of iron and wine of quinine.

During the attacks, muriate of quinine in doses of one gramme, administered after bleeding, whether local or general, afforded partial relief, but it is just to also add that apiol acted in like manner and with much more vigor, proving the antiperiodic *par excellence*. A year and a half after my last attendance upon her I was informed she still retained good health.

Paris, France.

APIOL IN AMENORRHŒA AND DYSMENORRHŒA.

BY DOCTOR BAILLOT.

Among the functional troubles of the uterus which the physician is frequently called to relieve, especially in cities and the manufacturing centres, amenorrhœa and dysmenorrhœa occupy a prominent place; and so difficult is it at times to determine the cause which gives rise to the malady, or maladies, that physicians are generally forced to acknowledge their powerlessness in the relief of these affections, and also are obliged to resort to varied and uncertain methods of therapeusis.

Some years since Doctor Joret, in the *Bulletin de Thérapeutique*, published a memoir on the emmenagogue value of apiol, and made a careful study of the numerous causes giving rise to amenorrhœa and dysmenorrhœa, formulating also the trite aphorism that diversity of cause demands diversity of treatment.

When either of these affections ensues as the result of plethora or anæmic or chloro-anæmic condition, or the general nervous superexcitation, it may perhaps be a matter of some difficulty to determine the precise manner in which the apiol should be employed. According to Joret, it is indicated when the menstrual disorder proceeds from diminution, excess, or perversion of uterine vitality; when ovarian sensibility is considerably augmented; and when the irritation determines an altogether abnormal excitation of the genito-urinary apparatus to the extent of causing pain sufficiently severe to extort groans from the patient.

But as it is not sufficient to give the first indication, and as it is essential to make known when and how apiol should be administered, Joret opines that the most opportune moment is at the period when menstruation is about to be established. This may be easily determined by the pain in the loins, the sensation of weight in the lower part of the abdomen, the nervous irritation, etc., all of which are more or less pronounced, and disappear after the lapse of several days, only to reappear periodically every four weeks. As to the mode of employment, he gives in the morning and evening, continuing after the appearance of the menses and during their duration, in the dose of three to four minims, in gelatin capsules.

Desiring to examine the value of this medicament, I prescribed it on several occasions, and must acknowledge I have been more fortunate with it than with any other of the oft-vaunted emmenagogues; in evidence whereof I present four cases:

Case 1.—Miss D——, aged 18; sub-forewoman of a factory; of good constitution, having never been seriously ill; breasts sufficiently developed to evidence her having arrived at puberty; nevertheless has never menstruated. For several months she complained of having felt during several days about every four weeks a sensation of weight with dilatation of the lower adbomen, twitching in the groins, and general malaise, with a tendency to melancholia; in the intervals of such crises she enjoys perfect health. I accordingly took advantage of the reappearance of one of these attacks to administer daily two four-minim capsules of apiol, one in the morning and one in the evening. The

following day the menses appeared, without pain, and persisted two days. The succeeding month the same prescription produced like result, and to-day the catamenia is perfectly established.

Case 2.—Miss A——, aged 19; cotton-spinner; strong; of good constitution; has menstruated since the age of 14, each epoch being accompanied with violent pain in the groins and thighs, uterine colic, and scorching heat at the vulva. The entire series of the most vaunted emmenagogues were employed one after another, but without relief. Subsequently I had her take one capsule of apiol morning and evening the day before that on which she expected her period, and advised that the same treatment be followed during the continuance of the flux. From the very first day the flow continued with facility, and notably the pains in the uterus, groins, sides, etc., were lacking. This result rendered my recommendation to persist in the use of the medicament throughout the flux in some degree superfluous. Ever since her periods have occurred with the greatest regularity.

Case 3.—Madame H——, aged 34; cotton-spinner; strong constitution and plethoric temperament; menstruated regularly from her seventeenth to her thirty-first year, and until the latter age her health had never suffered. Married at 30, she became a mother the following year; and beginning with this epoch her menses were not only less abundant, but occurred only in connection with very severe pain in the loins, the lower abdomen, and the thighs, forcing her to take to her bed the day preceding their appearance. The dysmenorrhœa had persisted for three years. She was ordered a capsule of apiol in the morning and another in the evening of the 30th of October, when the menses appeared in greater abundance and without the slightest accident. The success of this treatment, which she had no reason to stop—previous measures having afforded her but slight relief—naturally prompted her to resort to the same remedy in the last few days of the following November, since which time she has menstruated easily and normally.

Case 4.—Madame B——, aged 28 years; lymphatic temperament; always menstruated badly—not only have the intervals between the periods been extended to five and six weeks and frequently to two months, but the flux manifested itself in the form of small elongated clots, scarcely colored, accompanied with most severe pain in the loins and lower abdomen. She never experienced pronounced leucorrhœa, however. Put upon apiol treatment during two successive menstrual epochs, she was at the same time ordered to continue the use of bitter and ferruginous tonics. The menses appeared at first a little more abundant, the blood a little more clear, and accompanied with less pain; but the second month the congestion proved considerably more satisfactory, and ever since the flow has been completely established and occurs normally.

Apiol as an emmenagogue possesses, in my opinion, the greatest efficacy; it should therefore occupy an important place in therapeutics.

Bar-le-Duc, Meuse, France.

THE HOTTEST YEARS KNOWN TO EUROPE.

A.D. 738.—The heat was such that almost all the fountains dried up, and thousands of men perished from thirst.

879.—Haymakers who neglected to cease work at noon fell down dead.

990.—Almost all the fruit dried up; a great dearth followed, during which time many died of hunger.

1000.—In Germany all the springs dried up, and dead and putrefying fishes caused a general epidemic; it was thought the world was on the point of being burned up by fire.

1132.—Rivers and springs dried up, and the bed of the Rhine became a sandy desert road.

1182.—The sands were heated to such an extent that in a few minutes eggs could be cooked in them.

1303.—The Seine, the Loire, the Rhine and the Danube were crossed over dry-shod.

1393.—All fruits dried up, and animals fell down dead from the heat.

1388-91.—Four years of continued drought; a great many rivers disappeared.

1646.—Fifty-eight consecutive days of extraordinary heat.

1648.—No signs of rain from April to October. The thermometer (Reaumur) registered 36° (113° F.), and even in gardens that were watered the fruit died.

1810.—Theatres remained closed for a month on account of the heat. The thermometers registered more than 38° Reaumur (117° F.).

1830.—In Paris, during the days of June and July, fightings went on with a temperature of over 96° F.—*L'Italia Termale.*

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

DEATH FROM EMBOLISM (?)

Editor MEDICAL AGE:

Mary L——, aged 25, of Norwegian parentage, family history good, of heavy muscular physique, had never been ill save with the diseases incident to childhood. On the 1st of March she noticed a peculiar fluttering about the heart—that it would strike heavily against the chest walls; also that her breath was short and she could not sleep well.

March 20th I found on examination valvular insufficiency, regurgitation, and feeble and irregular action. I prescribed digitalis in ten-drop doses, and applied counter irritation over the præcordial region, keeping the patient quietly in bed.

March 21st. Had slept better; heart's action and respiration improved. Continued treatment, with a light nutritious diet.

March 22d. Still improving. At 9.30 A.M., against my wishes, she got up and dressed, and remained about the house all day. At 4 P.M. I was hastily summoned, and found her with complete hemiplegia. She had suddenly felt dizzy, then lost consciousness for a moment and fell to the floor. Her attendants carried her to bed, and she was perfectly conscious when I arrived. The paralysis was on the left side of the body, involving both head and extremities; sensation was very imperfect on the affected side, but gradually grew better, so she was able to distinguish a pinch or a prick of a pin. She conversed in an intelligent manner, did not experience any pain, but was very restless. I prescribed some bromide, and she passed the night quietly.

March 23d. General condition about the same; sensation better; pupil dilated on the affected side; intellect cleared up till evening, when she began to breathe badly and have aberrations of intellect. I administered strychnine and atropine hypodermatically, and gave spirits every hour. Intellect cleared up some; pupil still dilated; slight movement of the left arm; temperature 101° on right side, 100.5° on left. At 11 P.M. she was very restless, when I gave another hypodermatic injection of strychnine ($\frac{1}{50}$ grain), atropine ($\frac{1}{150}$ grain), and morphine ($\frac{1}{4}$ grain). She went to sleep and rested well until four o'clock in the morning; then she was wakeful, restless, and talked incoherently.

March 24th. Condition about the same. Same treatment.

March 25th. Aberration of intellect merged into coma; coma deepened; breathing stertorous; lungs œdematous. Died in coma at 6.30 P.M.

Post-mortem examination could not be obtained. My diagnosis was embolism, arising from the diseased heart and finding lodgment at some point in the base of the brain.

I earnestly solicit criticism upon the case. I regret post-mortem could not be had, since it would have cleared up any doubts as to diagnosis or pathology.

ROBERT L. MURDY.

Mound City, South Dakota.

APIOL AS A REGULATOR OF MENSTRUATION.

I have just obtained so signal results with Apiol in regulating the menstrual flux, that I feel it incumbent upon me to note the same for the benefit of the profession:

Madame L——, aged 28 years, childless, had never menstruated well; indeed, the menses were irregular, and never appeared twice in two consecutive months; the intervals usually were nine, twelve, or even fifteen months. All the most vaunted emmenagogues had been prescribed in vain—she could never observe any benefit from any. Likewise she had visited various mineral springs and taken numerous mineral baths, without the least avail.

I advised Apiol to be taken in the following manner: During the first month, four capsules of three minims each, in two days; during the second month, six capsules in three days; during the third month, eight capsules in four days. The drug appeared to be of little benefit during the first two months, but on the third occasion she took the maximum dose, that is to say eight capsules, which at once caused return of the menstrual flux, the flow lasting five or six days and unaccompanied by suffering—I mention particularly the absence of pain because she had previously suffered excruciatingly from uterine colic, which persisted during the entire catamenial period. As on this occasion the pains did not recur, it may naturally be inferred that Apiol possesses the faculty of provoking the menses without irritating the chief generative organs. The same results continued with Madame L—— for five consecutive months without interruption.

This case seems to me remarkable, for it presented not an instance of temporary retardation, but of suppression so absolute and

so prolonged as even to be habitual; one might have been tempted to believe—as did several physicians—that it would be impossible to correct it. Nevertheless I obtained this important result, thanks to Apiol, which seems to be beyond all cavil the most powerful and certain of the emmenagogues.

BARBETTE.

Montreal, P. Q.

LEPROSY AND CHAULMOOGRA OIL.

Editor MEDICAL AGE:

A few months ago an East Indian, aged 22, was found wandering about this city, and when sent to the Pennsylvania Hospital for treatment was found to be a leper and transferred to the Municipal Hospital. Being under my charge, I began the use of Chaulmoogra Oil and tincture of Hoang Nan, and now, after six weeks under this treatment, I am satisfied the patient is being considerably benefited. He is able to treat himself as far as bathing with the oil is concerned, and is very enthusiastic over the results accruing to the use of these preparations. He is very intelligent, having been a pupil at an Oriental medical college. This particular form of leprosy seems to tend to harden and thicken the skin in spots; and also from time to time a deep discoloration appears in different parts of the body. The use of the oil externally seems to cause the blue discoloration to disappear, and bring the thickened skin back to its normal condition. Whether this is due solely to the oil, or to the use of both remedies, I am as yet unable to say, but after a more extended trial will submit a more detailed report.

W. R. BEMIS.

Philadelphia, Pa.

EUPHORBIA PILULIFERA AND MUIRA-PUAMA.

Editor MEDICAL AGE:

The following is my experience with *Euphorbia pililufera:*

The patient, a male, 50 years of age, had suffered from a severe type of asthma for fifteen years. Began treatment with fluid extract Euphorbia on May 20th, giving drachm doses three times during the day, and another drachm at bedtime.

This was continued without change until four ounces of the remedy had been taken. No material improvement in malady occurred, though the remedy appeared to render expectoration easier and more abundant.

I have treated one case of impaired sexual power with Muira Puama. The patient, 52 years of age, had been gradually declining in sexual power during the past fifteen years, and while not completely impotent the erections were feeble and emissions premature. In every other respect he was healthy and robust, but an inveterate tobacco-user.

Began with drachm doses of fluid extract Muira Puama in water, three times daily, after meals, and continued until four ounces had been taken. During its administration there was manifested some increase in sexual desire, but no apparent improvement in erectile power, and no influence over premature emissions.

The aphrodisiac power observed in this limited trial suggests that in a more prolonged administration of the remedy, with proper regulation of habits, it might prove to be a valuable agent in sexual debility. This trial demonstrates that it merits further investigation, when we take into consideration the long standing of the case and the age of the patient.

Respectfully,

R. W. GREEN.

Geneseo, N. Y.

TAKA-DIASTASE AND DYSPEPSIA.

Editor MEDICAL AGE:

Permit me to say a word regarding this new digestive ferment. I recently treated ten cases of amylaceous dyspepsia with this remedy with most satisfactory results. All suffered with continuous pain between meals, fullness and distressed feeling throughout the entire intestinal canal, and a moist tongue coupled with disagreeable taste, especially marked in the morning upon rising. One case which had resisted all forms of treatment for a period of ten years, and in which the condition of the tongue could not be changed by diet or the administration of any drug, the patient also suffering habitually from water-brash, obtained permanent relief by the administration of six-grain doses of Taka-Diastase after each meal and just before retiring at night; in all she took but eighteen doses.

Judging from the foregoing it appears to me that Taka-Diastase is a remedy of especial value, and much more practical in its application than any of the digestive ferments hitherto employed.

Very truly yours,

A. E. NEUMEISTER.

Kansas City, Mo.

Reports of Societies.

WINDSOR MEDICAL ASSOCIATION.

A regular meeting of this organization was held Tuesday, June 11th, 1895, at the office of Doctor J. O. Reaume, President Chas. W. Hoare in the chair. Present: Doctors Coventry, Carney, Cruickshank, Going, Prouse, Paré, Casgrain, Brooks, Sanderson, Samson, Aikman, Reaume, Ashbaugh, and Campbell of Detroit.

The minutes of the previous meeting were read and approved.

Doctor Coventry, Chairman of Delegates to the Ontario Medical Association, reported the latter had voted to meet in Windsor in 1896. Report accepted and a vote of thanks extended to the delegates.

The report of Committee on Lodge Practice was again laid over.

President Hoare then called upon Doctor Don M. Campbell to read his paper on "Gonorrhœal Conjunctivitis."

Discussion. — Doctor Prouse never uses nitrate-of-silver solution at the commencement, but waits until severe inflammation has subsided; cold compresses, and douching as often as possible; leucorrhœal discharges will produce an inflammation very similar to gonorrhœal.

Doctor Coventry endorsed the paper; always sends patients to hospital if possible; is strongly opposed to scarification as practiced by some.

Doctor Reaume has had great trouble in having treatment carried out; depends greatly on proper nursing.

Doctor Hoare referred to the fact that the disease is very amenable to treatment in the infant, but quite the reverse in the adult.

Doctor Campbell was very much pleased with the way in which the paper had been received. The most important change in treatment was the resort to milder methods. Referring to Doctor Hoare's remarks, would say that in the infant the inflammation expends itself on the palpebral portion of the conjunctiva, and in adults on the ocular portion—thus a greater percentage of infants make a good recovery; perhaps this is on account of some further development of ocular portion in the adult, leaving it more susceptible to inflammation.

Doctor Hoare gave details of a case he supposed to be cerebro-spinal meningitis, in a delicate child with poor surroundings. She had been skipping the rope a good deal. Onset sudden; extreme pain in head and joints; screaming when asleep; marked opisthotonos. Temperature from 102° to 104°. Absolutely deaf from onset, and remained so ever since, although she has recovered and is perfectly well in other respects.

Doctor Cruickshank related a case of continued fever with opisthotonos; became perfectly deaf, with gradual recovery.

Doctor Samson told of an epidemic of cerebro-spinal meningitis occurring some years ago, the victims being chiefly children of from ten to fourteen years of age. The onset was sudden, with high fever; intense rigidity; pain in head. The course of the malady embraced five or six weeks, and about one in four was left perfectly deaf, a condition from which many never recovered. In matter of treatment the head was shaved and blistered, very hot cloths applied to back of neck and spine, bromide of potassium and ergot given internally.

Doctor Prouse related a case similar to Doctor Hoare's that persisted nearly three months. Temperature was very high and there was great emaciation. After trying various remedies he at last gave large doses of quinine, which brought the fever down, with the result of immediate improvement. There was total loss of hearing, and one eye became inflamed and the sight lost.

Doctor Carney had several cases with temporary loss of hearing; gave ergot, potassium bromide, and chloral for the spasms.

Doctor Campbell remarked the case reported by Doctor Hoare was the first he had seen so early. The auditory nerve was implicated. If inflammatory products are absorbed soon enough, hearing will return. He employs potassium iodide to favor absorption.

Doctor Hoare thought the case had not been discussed from the proper standpoint. It was never alarming in any other respect except that the hearing was lost from the onset.

Doctor Casgrain had seen cases of cerebro-spinal meningitis with deafness, and sometimes with strabismus as well, and both conditions are apt to be somewhat slow in disappearing. Employs potassium bromide and Calabar bean.

Doctor Casgrain extended an invitation from the Water Commissioners to the Society to be present with them on a trip to Lake St. Clair for the purpose of investigating the river current and taking samples of water for analysis.

Society adjourned to meet at the office of Doctor Going, on the evening of July 9th.

J. A. Ashbaugh,
Secretary.

Windsor, Ontario, June 15th.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., JULY 10th, 1895.

Editorial.

APIOL.

Ever since the active principle of parsley was discovered and evidence afforded of its therapeutic qualities, the impossibility of securing a uniform and satisfactory product has been a source of great annoyance to practitioners; so much so, indeed, that the use of this valuable medicament has been abandoned by scores of physicians who would very much like to avail themselves of its properties. Even works on materia medica and therapeutics seem to be at loss as to just what constitutes Apiol. As a matter of fact, there are several widely differing products marketed under this name: First, there is a chemically pure parsley camphor, had in white, slender crystals—the true Apiol that, from the clumsy manner in which it is extracted, has heretofore been beyond the reach of medical science: Second, the essential oil of parsley—which is very largely sold: Third, an oleo-resin extremely rich in fatty acids, woody fibre, cellulose, chlorophyll, etc., with a very minute percentage of true parsley camphor—one to three per cent.—which manifestly renders it devoid of therapeutic value. Finally, there is a preparation that purports to be the "active principle of Apiol" by virtue of the terminal *ine*, and that professedly is exhausted from parsley seed with light petroleum ether. The manufacturer of this preparation, which is of a proprietary character, declares that "the resultant liquid obtained on distillation leaves a semi-coagulated residue of neutral substance, fatty acids, etc., partially soluble in alcohol; this latter on evaporation yields a product which on the addition of caustic soda develops a thick reddish liquid, (chemically speaking) pseudo-apiic alcohol."

The facts are, however, that the process just outlined yields neither Apiol or any active principle; hence it is apparent all the verbiage is employed merely to mislead and to give apparent legitimacy to a proprietary solution holding in suspension a modicum of true Apiol, and oxydized (made red) by the action of sulphuric acid.

After several years of experimentation, Messrs. Parke, Davis & Co. have recently been able to formulate a process whereby *true* Apiol or parsley camphor is segregated at moderate expense; this camphor is in the form of white, silky, needle-like crystals, that melt at a comparatively low temperature. To overcome the commercial disadvantages of a melting-point which renders the product liable to frequent variations in form and appearance, Apiol is now by this firm prepared as a solution, seventy-five per cent. of which is pure parsley camphor. Thus the chlorophyll, the fatty acids, the cellulose, etc., are got rid of, and the preparation becomes stable in all climates; it is, moreover, double the strength of the French proprietary preparation, and twenty times the strength of the best "Apiol" marketed as a straw- or chlorophyll-tinted fluid. A special advantage of this preparation is that its strength may be readily determined by any physician or chemist, merely by subjecting a quantity to a low degree of temperature, when the Apiol crystallizes out.

In other columns of the present issue of THE MEDICAL AGE will be found papers relating to the therapeutic employment of Apiol; and among the maladies for which it has been especially recommended in the United States, Great Britain, and France—aside from malaria, amenorrhœa, and dysmenorrhœa — are inflammation of the genito-urinary tract, rehal maladies, and more especially cystitis.

Generally regarded—and with good reason —as a specific remedy for functional dysmenorrhœa and amenorrhœa, it possesses one especial advantage, viz., that it may be administered for the relief of cystic and renal maladies in pregnant women. Its tendency is to repress rather than promote abortion, and consequently it becomes a safe test in a

certain class of cases that are especially apt to seek at the hands of medical men relief involving a criminal operation.

The ease and comfort derived by the gentler sex from the use of Apiol in conditions where it is demanded are beyond measure. It is more certain in its effects, and more successful in the relief afforded from the tortures of painful menstruation, than any agent or combination of agents hitherto known to the materia medica.

A NEW AND WONDERFUL FERMENT.

A highly interesting clipping from the editorial columns of *The Lancet* (London) appeared in THE MEDICAL AGE for June 25th, describing the newly discovered ferment Taka-Diastase; and it is evident, if but a tithe of the claims made for this product are substantiated, there has been secured a starch-digesting enzyme of marvellous potency.

Scarcely less wonderful than its apparent and remarkable amylolytic properties, is the history of the discovery and details of the systematic investigations which finally resulted in securing to therapeutics the remedy that promises such brilliant results. For all this, science is indebted to an Oriental chemist, Mr. Jokichi Takamine, who, while a student at Glasgow, Scotland, was led to ponder over the primitive, costly and tedious methods by which the processes of malting are carried out, and on his return to Japan seized the opportunity to enter upon a searching examination of the different varieties of microscopic fungi or mould-growths, with the view of securing an agent that should not only transform the starch of cereals into sugar, but likewise convert the latter into alcohol. Thus the ferments known to Occident and Orient alike were passed in review and experimented upon; even the ergots of rye and maize, various bacterial germs, and the multitude of fungi, came under his scrutiny—all without avail. But when attention was turned to *Eurotium oryzæ*—a fungus known also as the *Aspergillus oryzæ*—astonishing results followed and the labors so eagerly pursued stood crowned with success.

Experiments in cultivating the *Aspergillus* proved wheat bran to be the best medium for its growth; here it not only rapidly matures, but reproduces its own seed. In the commercial process, maturing is not permitted to proceed to fertilization, but is checked at a point where the ferment attains its highest activity; and the resulting product, termed "Taka Koji," combines in itself a highly potent diastase with a powerful generator of alcohol-fermentation. From this latter, at the proper stage, the diastase may be separated by washing, it being freely soluble in water.

When it is considered that this diastase is the most powerful of all the digestive ferments, the most direct in action, and moreover capable of transforming one hundred times its weight of dry starch into sugar, its therapeutic possibilities are at once apparent. It is more than probable that the majority of cases of chronic indigestion, dyspeptic constipation, and dyspeptic diarrhœa, arise from a sluggish condition of the *primæ viæ*—a sluggishness that may be born either of over-indulgence in amylaceous food, of sedentary habits, organic inactivity, or general lack of intestinal tone. In the past no truly starch-digesting ferment has been available, those heralded as such possessing but feeble power and being, moreover, objectionable because of their association with substances liable to aggravate already existing morbid conditions. Taka-Diastase, however, being a pure, isolated ferment devoid of all admixture, is stable, pleasant to take, and promises—if half of what is claimed for it is true—to render almost magical service in a wide category of cases that up to the present have remained unamenable to direct treatment. From the experiments that have already been made, moreover, it would appear that it exerts a wonderful influence in assisting assimilation by stimulating secretion, completing imperfect digestion, and securing the full value of ingested food which under uncorrected pathological conditions is oftentimes as much a source of irritation and distress as of renewed vitality.

Certainly the value of this ferment is not lessened by the fact that, far from being a casual discovery, it is the reward of protracted, delicate, and intelligent experimentation.

AN ODIOUS COMPARISON.

Under the caption "The Dog or the Glass," the *Newcastle* (England) *Chronicle* gives utterance to the following:

So-called hydrophobia is a terrible disorder, so imperfectly understood that anything in connection with it seems possible. The case which has just come up at an inquest at Leeds may claim, however, to be more remarkable than any previous instance. A gentleman had a dog in his house, and was scratched by it some little time ago in the leg. It is not recorded whether the scratch proceeded from the animal's paws or teeth; but it is stated that there was no abrasion of the skin, and that the gentleman thought nothing of the matter. The dog in the meanwhile was noticed to be out of sorts; and as Leeds has been of late suffering from a supposed epidemic of rabies, it was deemed prudent to have the animal destroyed. There was a post-mortem examination of it, but no symptoms whatever of rabies were discovered. A little later the same gentleman injured his hand with glass, getting a nasty jagged wound which proved troublesome and difficult to heal. He never actually recovered thoroughly from this hurt; and as time went on, symptoms declared themselves of a nature recognized by the medical men who attended him as identified with hydrophobia. The unfortunate gentleman labored in his breathing, could not swallow, and eventually died in the infirmary, after much suffering. The cause of his death was put down to hydrophobia; and the coroner's jury returned a verdict to that effect. It must appear strange, nevertheless, that a mere scratch from a dog, who after death was found to exhibit no symptoms of rabies, should have been the origin of this fatality. Glass and tetanus seem to be more reasonable causes.

This evidence of common sense on the part of a lay newspaper stands out in strong and refreshing contrast to the utterances of *The Lancet* (London), which after editorially declaring that "rabies *in dogs* still prevails in its old haunts in Lancashire and Yorkshire, though it is present in other parts of England and also in Ireland," reports the same case seriously as one of "hydrophobia," and uses it as the text for a screed having for its burden wholesale canine murder.

A remarkable fact in connection with the foregoing is the attempt to rehabilitate as truth the oft-exposed falsehood that in portions of England rabies is perpetually and endemically running riot, with frequent spasms of epidemic character—this in face of the fact that for years any attempt to produce a genuine case of hydrophobia either in animal or man has met with failure. During the years the British Hydrophobia Commission was in existence, that body found it impossible to discover, throughout the length and breadth of the land, even one rabid dog for experimental purposes.

When medical journals foster such idiotic scares, and when medical editors write gnostically of matters of which they are manifestly utterly ignorant, who can blame the untutored general public for its wild spasms of fear and subsequent eager credence given to the claims of every nostrum-monger? Again, when scares are fostered and advertised by the leading medical journals of the world, it is a pertinent query if a missionary to teach civilization would not find his best opportunities in and about Regent Street and Strand, in the heart of London, rather than in Central Africa.

TREATMENT OF THE MORPHINE HABIT.

Doctor H. Macnaughton Jones summarizes the different methods of treating the habit as follows:

"The method of Lewenstein—the abrupt suppression or sudden stoppage of the drug; this has been found dangerous and not to answer:

"The plan of Erlenmeyer—gradual suppression, or gradually reducing the doses of morphine, and extending this over some time:

"The medium course of moderate suppression, or stopping morphine gradually in the course of some eight or ten days—this plan may be carried out by the aid of hypnotics:

"Alcohol as a substitute for morphine—this is usually a failure:

"Substitution of chloral for morphine—this is also a failure:

"Substitution of opium and other of its alkaloids—likewise a failure:

"Substitution of nitro-glycerin and other drugs for morphine—also a failure:

"The best plan is the treatment by suppression combined with other judicious treatment, by control, diet, and the use of hypnotics. The substitution of water in the solution of morphine is not without danger. When discovered it is apt to excite indignation on the part of the patient, who will refuse to be again guided by the physician, and thereby the last state may become worse than the first; suicide has followed several such instances."

The risk attending the use of morphine in the treatment of affections of the pelvic organs in women is often not sufficiently recognized. The influence of temperament should be carefully considered in its administration, the hysterical and neurotic being especially susceptible to intoxication by the drug—in such cases morphine should be used only as a *dernier ressort*, and rarely if ever for the relief of what may be termed suggestive pain. This is true of many cases of ovarian neuralgia and reflex ovarian pains; also in those reflex spinal pains arising out of real or functional disorders of the generative organs of women, or in the insomnia arising from the same cause.

The use of morphine during the climacteric is particularly dangerous.

The risk of morphine intoxication should be guarded against as far as possible by the medical man himself (save under very exceptional circumstances) administering the injections. Only the quantity of solution for a limited number of injections should be prescribed at one time, and the prescription should for safety's sake be marked not to be again compounded unless re-initialed and dated; prescriptions for hypodermatic injections of morphine should not be given into the patient's hands. All patients and their friends should be warned against the danger of repeated administrations of morphine.

EDITORIAL NOTES.

Death of a Notable Illegitimate.

Prince Wilhelm Albrecht, of Montenuovo, who recently died in Krafft-Ebing's private lunatic asylum near Vienna, was the illegitimate son of Maria Louisa—second wife of Napoleon I.—by the ugly one-eyed Field Marshal Count von Neipperg. It was because of his extremely ill-favored appearance that the latter was selected nominally as "High Chamberlain" and "Chief Officer of the Household" of the ex-Empress of the French, but really as a guardian and to prevent scandal, since the virtue of the daughter of the Austrian Kaiser was not like that of Cæsar's wife. But even an ogre could not smother the passions of Louisa. She gave birth to Wilhelm Albrecht a year before Napoleon's demise. Though Von Neipperg married his royal concubine a fortnight after the news was received of the latter event, being compelled thereto by His Apostolic Austrian Majesty, the product of the antemarital *liaison* could not well be legitimized. Neither would the Von Neippergs allow Wilhelm to bear their name, whereupon his imperial grandfather bestowed upon him that of Montenuovo—which is simply the rendering of Von Neipperg into Italian—and ultimately raised him to the rank of Prince.

Josephine was an unfaithful wife, but when the great Napoleon espoused an Austrian grand duchess, so far as securing morality was concerned, he "jumped from the frying-pan into the fire."

Bogus Degrees.—

"Adept" writes to the *Chemist and Druggist*, wondering why so few of the dental practitioners of Great Britain who were registered before the passing of the Dental Act have made an effort to obtain a diploma or degree in the States. He seems to believe dental degrees are to be had on this side of the Atlantic merely for the asking.

Two letters recently reached the editor of THE MEDICAL AGE, one from British Columbia and one from Great Britain, asking "as a favor" where a medical degree could "be had *in absentia*."

If the reputation abroad of American medical education is so low as this, it certainly is time some steps were taken for the repression of bogus institutions. To be sure, all medical colleges deny the selling of diplomas, yet that certain institutions do *sub rosa* practically dispose of their "sheepskins" for cash is known to be a fact in localities more or less remote from their native heath.

Benefits and Evils of Morphine.—

Almost the last words of the late Doctor Hack Tuke, according to Doctor Macnaughton Jones, were:

> If all the benefits which have resulted from the use of morphine were balanced against the mischief which has followed its abuse, I doubt if the latter would not largely outweigh the former.

Doctor Jones believes that the clandestine use of morphine is on the increase, and he emphasizes the fact that it is the subcutaneous injection of the alkaloid which is specially dangerous.

Items and News.

The Hypodermatic Syringe.—

It is a question whether the invention of the hypodermatic syringe has been a boon or a bane to humanity. Undoubtedly it has given a power of actually saving life in cases of great agony such as renal and biliary colic, but even in such cases its use ought to be restricted. It is a remarkable fact that a successful means of breaking morphine-takers of their habit is based upon the much greater facility with which the drug can be withdrawn when taken by the mouth than when it is administered by the syringe. Indeed, in medical practice the hypodermatic syringe should be reserved for cases of great agony requiring immediate relief; a long course of opium, when necessary, should be given in other ways. Finally, it is almost criminal to entrust the patient with a syringe for the safe administration of morphine.—Doctor C. A. Mercier, before the British Gynæcological Society.

Are You Guilty?

The medical man is positively helpless without pure drugs. To comprehend a pathological condition, to recognize the remedy, is not enough. He must see that the chosen drug actually *performs* the work assigned to it, and this it will not do unless it is a pure and active preparation.

The doctor *must* look out for the quality of his drugs. There is no doubt whatever that the annual death rate from disease could be greatly decreased by proper attention on the part of the physician to this very essential point. He *must* compel the druggist to be honest, by unceasing watchfulness. He *must* recognize that poor drugs and substitution exercise as much influence as "the hand of Providence" in filling up our cemeteries. —*Brief.*

Medical Progress.—

A writer in *Borderland*, speaking of the general drift and progress of medical thought, says "that in the evolution in the art of healing we seem to be on the eve of three great changes. The first is the recognition of the virtue of the greatly reduced but more frequently administered doses; the second is the recognition of the value of the vegetable as compared with the mineral drug; and the third is the recognition of the value of those subtle curative agencies supplied by the animal world, as seen in magnetism, in hypnotism, and in those phenomena which show the influence of mind over matter."—*Brief.*

An Unusual Case.—

A Brooklyn dry-goods merchant and athlete died in hospital from an operation for the purpose of removing a human mole. Two months before he was taken ill; complained of sharp pains in the sides and back. An operation disclosed the presence in his side, solidly imbedded in the tissues, of a mole child, eight inches in length and perfectly formed. The child was an encysted twin, which had remained in its brother's side from birth. Death was due to blood-poisoning.—*New York Polyclinic.*

Anent the Tablet Craze.—

Doctor John V. Shoemaker is not a believer in compressed-tablet medication. Enthusiastic advocates of the use of tablets, he says, seem disposed to trust to them too exclusively on account of convenience in dispensing, and portability, which makes them acceptable to the physician and to many patients. But the best results are to be had from a skillful adaptation of different forms of medicine in different conditions and according to the exigencies of each case. —*Western Druggist.*

Medical Ethics and Medical Science.—

These cannot be separated. If quackery and charlatanism and self-seeking are allowed to become dominant in medical associations, and to win the rewards of honor which should be bestowed upon opposite qualities, those who enter the ranks of the profession will be encouraged to pursue the wrong and deterred from following the right. Under such circumstances greed and untruth must come to the front, and science cannot flourish where this is possible.—*Philadelphia Polyclinic.*

What Does it Mean?—

The second International Convention of Scientists recently convened in Chicago. Several hundred men and women were in attendance, embracing mental healers, truth-seekers, Christian scientists and scientists of the divine, mental and spiritual orders, the Association being liberal in its membership. The cardinal principle of belief upon which the Association is founded is that "*The expression of subjective unity is objective harmony.*"—?

A Gruesome Discovery.—

According to the *New York Times*, an investigation of the cause of the prevalence of contagious diseases in the schools of New York City has disclosed the fact that out of

112 school trustees twenty per cent. are undertakers—a fact which the *Times* says "would be amusing were it not so tragical."

Examination of Infants.—

In every case of labor the physician should make it his duty to carefully examine the genital organs and anus of the child to see if they are normal. A little care at this time may save considerable chagrin later, if an abnormal condition is discovered by a competing practitioner.—*Homœopathic News.*

Two Views of Bacteriology.—

Neuralgia, sick headache, dyspepsia, biliousness, catarrh of the bowels, jaundice, and stone in the bladder, are caused by microbes. —*Bacteriological Review.*

The moon was probably full and there was a black cat on the fence when the discovery was made.—*Homœopathic Record.*

Blindness Caused by Male Fern.—

Recently, to the Medical Society of Buda-Pesth (Hungary), Grosz gave account of a case of complete blindness caused in a man thirty years old as the result of administration of male fern and pomegranate; there had previously been some weakness of one eye.

A Suggestion in Vivisection.—

The Dog Fancier publishes an editorial claiming that vivisection should be practiced *upon depraved human criminals*, and *not upon dumb but innocent creatures.—Our Dumb Animals.*

Non-immunized Serum.—

Doctor Bertin, of Nantes, has made the discovery that non-immunized horse-serum is identical with the immunized, and acts in the same manner.—*Recorder.*

A Deal of Truth.—

"A physician should give as much study to diet and cooking as to physic. It does a practitioner no harm to bear the reputation of a gourmand."—NIEMEYER.

Beware!—

The bloom of the peach and the purple of the grape are but "a growth of microbes."—*Exchange.*

What's in a Name?—

Undertakers have resolved that hereafter they must be known as "morticians."

Book Reviews.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 a year. Harry C. Jones, New York.

The contents of the July number are: "Japan in American Art," by George Parsons Lathrop; "Outdoor Life in Norway," by H. H. Boyesen; "Moral Reflections upon Burlesque Art," by Tudor Jenks; "Jean Valjean," by Victor Hugo; "Silver-Point;" "A Neglected Art," by Hillary Bell; "Shall our Rooms be Artistic or Stylish?" by Clarence Cook; "A Painter of Picturesque Interiors," by Peter McArthur; "Country Sights and Sounds," by Hamilton W. Mabie; "The Wild Huntsman;" "Sea-weeds and Their Preservation," by Helen Leeming Jelliffe; "The Pottery of the American Indians," chapter III, by W. J. Hoffman, M.D.; "Notes at the Zoo," by Barnet Phillips; "From Cologne to Costa Rica," by Philip G. Hubert, Jr.; "Indian Bows and Quivers," by Ernest Ingersoll. The illustrators are Miss Carol M. Albright, Miss Adelia B. Beard, Hillary Bell, J. L. France, Edwin G. Lutz, Edward L. Morse, Otto Stark, G. A. Traver, Miss Clemence Van den Broeck, Frederick Williams, and others.

THE CENTURY MAGAZINE. Price, 35 cents; $4.00 per year. The Century Co., New York.

The July number contains: "American Rural Festivals," by Mrs. Burton Harrison; "Abandoned," by Madison Cawein; "The Blighting of Mynheer van Steen," by Anna E. King; "Casa Braccio," chapter IX, by F. Marion Crawford; "Corinna's Fiammetta," by Mrs. Van Rensselaer; "The Changelings," by Jeannie Oliver Benson; "Gerard Terburg," by Timothy Cole; "The Strike at Mobley's," by Matt Crim; "Life of Napoleon Bonaparte," continued, by William M. Sloane; "The Future of War," by Fitzhugh Lee; "The Princess Sonia," chapter III, by Julia Magruder; "A Japanese Life of General Grant;" "Personal Memories of Robert Louis Stevenson," by Edmund Gosse; "John C. Breckinridge and Hannibal Hamlin," by Henry L. Dawes; there are also several minor papers of interest.

ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The July number contains: "The Seats of the Mighty," chapters XII and XIII, by Gilbert Parker; "The Ship of State and the Stroke of Fate," by William Everett; "Rural England," by Robert Swain Peabody; "A Philosopher with an Eye for Beauty," by Robert

Beverly Hale; "Vain Freedom," by Louise Chandler Moulton; "A Talk Over Autographs," by George Birkbeck Hill; "The Song of the Veery," by Henry van Dyke; "Beautiful and Brave was He," by Olive Thorne Miller; "The Childhood and Youth of a French 'Macon,'" by J. M. Ludlow; "A Singular Life," chapters XVIII and XIX, by Elizabeth Stuart Phelps; "The Mountain Ride," by Clinton Scollard; and "The Elizabethan Sea Kings," by John Fiske.

McCLURE'S MAGAZINE. Price, 10 cents; $1.00 per year. S. S. McClure, New York.

The July number contains a dramatic chapter from the history of Tammany—the autocratic reign of Tweed. There is an article by Sir Robert Ball, Professor of Astronomy in the University of Cambridge, England, which shows that recent scientific discoveries tend to support the theory that other planets, as well as the earth, maintain life. Cy Warman describes a ride on the locomotive of a London and Paris express; Cleveland Moffett supplies, from the Pinkerton archives, a history of the stealing of an express parcel containing $41,000; and a poem addressed by Edmund Gosse to Robert Louis Stevenson, which reached the latter but a day or two before his death, appears in this number. There are likewise several short stories.

THE ECLECTIC MAGAZINE. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The July issue opens with a fine essay, "For the Beauty of an Ideal." Other articles are: "The Art of Justice;" Prestwich's "Greater Antiquity of Man;" and Doctor Pearson's "True and False Notions of Prayer." Miss Balfour's account of "Twelve Hundred Miles in a Wagon" is concluded—while other papers descriptive of foreign travel are: "A Visit to a Japanese Shrine," "Burmese Women," and "Recollections of a Visit to Samoa and the Home of the late Robert Louis Stevenson." One of the most interesting numbers is the story of "Sophie Kovalevsky," the gifted Russian mathematician. There is a good variety of other sketches and shorter articles selected from current foreign literature.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia.

The complete novel in the July issue is "A Social Highwayman," by Elizabeth Phipps Train; Francis Lynde furnishes "The Strike in Piñon Gulch;" Will N. Harben gives a Southern story, "Matt Digby's Meddling," and Lieutenant Charles Dudley Rhodes one of the Army, entitled "The Recall of Flathers." Shorter tales are "McGheoghan's Lapse," by the late Willis Chamberlin, and "From Four to Five," by C. K. E. Charles Morris gives an account of "The Railroad Invasion of Asia;" J. Kumpei Matumoto explains the mysteries of "The Tea Ceremony of Japan," and Alvan F. Sanborn describes "The Great Market of Paris;" "Fact in Fiction" is by F. M. Bird.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Company, New York.

In the July number "An American Drama" is discussed by Beaumont Fletcher; other leading articles are devoted to the history of the "Stars and Stripes," "Smith College," the "National Sculpture Society," and the greatest American composer, E. D. MacDowell. In the fiction we find: "The Legend of the Jasmine Flower," by John Henry Dick, and "Desire," a tale of Puritan times, by May Kelsey Champion. There is the usual array of short stories, sketches, poetry, book reviews, etc.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 per year. Charles Scribner's Sons, New York.

The July number contains: "Life at the Athletic Clubs," by Duncan Edwards; "The Summer Problem," by Robert Grant; "As Told by Her," by Miss Goodloe; "The Price of Romance," by Robert W. Herrick. Mrs. Humphry Ward's novelette, "The Story of Bessie Costrell," reaches a most impressive conclusion. "The United States Will Pay" is by E. Benjamin Andrews; "Posters and Poster Designing in England," by M. H. Spielmann; "The Amazing Marriage," by George Meredith.

THE NORTH AMERICAN REVIEW. Price, 50 cents; $5.00 per year. North American Review Co., New York.

The issue of July contains "Fenimore Cooper's Literary Offenses," by Mark Twain; "Contemporary Egypt," by Frederic C. Penfield; "Thirty Years in the Grain Trade," by E. R. Williams; "Wild Traits in Tame Animals"—III, by Doctor Louis Robinson; "The Disposal of a City's Waste," by George E. Waring, Jr.; "Personal History of the Second Empire"—VII, by Albert D. Vandam; "A Reply to My Critics," by Doctor Max Nordau; "Kidd's 'Social Evolution,'" by Theodore Roosevelt; "The Decay of Literary Taste," by Edmund Gosse; and the usual "Notes" and "Comments."

PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 per year. The Fowler & Wells Co., New York.

The July issue offers a study of Walter Damrosch by Edgar Beall; "The Benefits of Phrenology for the Preacher," by Reverend N. F. Douglass; "Chinese Cruelty," anonymous; "The Reverend George S. Weaver," by Charlotte S. Wells; "Where are We?" by Doctor H. S. Drayton; "A Study in Conceit," by the Editor; "Who Bides His Time," by James Whitcomb Riley. There are the usual notes on "Child Culture," "Science of Health," "Anthropology," editorials, etc.

POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

In the July issue there are two articles by Herbert Spencer—one devoted to the "Dancer and Musician," the other to "Mr. Balfour's Dialectics." Doctor Andrew D. White has an article on "Beginnings of Scientific Criticism." Professor Sully continues the discussion of *Fear* in his "Studies of Childhood." Doctor Charles F. Taylor writes of "Climate and Health."

THE MONIST. Price, 50 cents; $2.00 a year. The Open Court Publishing Co., Chicago.

The July issue deals with the "Theory of Evolution and Social Progress," by Professor J. LeConte; "Materialism Untenable," by Professor A. E. Dolbear; "The Unseen Universe," by Sir Robert Ball; "Present Problems of Organic Evolution," by E. D. Cope; "Science of Mentation," by Elmer Gates. There are the usual criticisms, discussions, book reviews, etc.

THE ROYAL NATURAL HISTORY. Edited by Richard Lydekker, B.A., F.R.S., F.Z.S. Paper; royal 8vo; pp. 96. Price, 50 cents. Frederick Warne & Co., New York.

This is No. 1 of Volume I of Warne's Library of Natural History, which will be completed in thirty-six parts, published fortnightly, at the extremely low price of $11 per annum. This first issue appears with a magnificent chromo frontispiece of a lion and lioness, while midway in its pages is a second plate of like character representing a group of five baboons—plates that are certainly works of art.

The first chapter appears with a very thorough, complete, but concise description of the characteristics of Mammals, which embraces their osteology, odontology, etc.

Chapter Two deals with the order Primates —apes, monkeys, and lemurs, the peculiarities of which are described and compared, and further elucidated by means of plates—the *Simiadæ* are thus conclusively shown to belong to the class *Bimana*. The portraits of the chimpanzee are of a more than ordinary degree of excellence, and are unmistakably from life. Next is a very complete history of the gorilla, in which are discussed his characteristics, relationship to man, structure, color, geographical distribution, mode of life both free and in captivity; this too is illustrated by a very interesting series of portraits of the young gorilla at play. Then follows the orang-utan, which is dealt with in an equally comprehensive manner with illustrations from life. Young orangs and gibbons are compared by means of a full-sized plate. The chapter is completed by a description of the gibbons and their fossil relatives.

Chapter Three deals with Old World monkeys and baboons — with seven species of langurs, the crested lutong, douc, and gureza; banded-leaf, negro, purple-faced, dusky-leaf, proboscis, black, ursine, white-thighed, and king monkeys; and bay and crested colobs.

Chapter Four describes the guenons, the talopoin monkey, and malbrouck.

This work, which has already been reviewed abroad, is declared by Mr. W. Tegtemire, the Curator of the Zoölogical Gardens of London, to be the most complete and authentic ever published—in which estimate we heartily concur. Further, it has received the most hearty indorsement of all the prominent naturalists on both sides of the Atlantic.

THE EMIGRANT SHIP. By W. Clark Russell. Paper; 12mo; pp. 348. Price, 50 cents. The Cassell Publishing Co., New York.

This is one of the many thrilling works from the pen of this well known author, and is in his very best strain. There is more plot than is usual with Mr. Russell's sea stories, and we find the hero starting out with an evil captain and dishonest owner who desire to wreck the ship for its insurance, and subsequently gotten rid of by being thrown by the latter over a cliff on those barren rocks — they can hardly be called islands—known as The Salvages. Next he is rescued by a barque under the command of an old shipmate, from which vessel he is kidnapped into a ship that has lost its officers and is carrying women emigrants to Australia. Here he is confronted with a crew who desire to sail the ship to a South Sea island and form a settlement after the manner of the historic crew of the *Bounty*, though without resort to illegal measures. Finally the hero, having disposed of the crew and certain of the women on an island in the mid-south Pacific, navigates his ship to Sydney with a female crew. The sea descrip-

tions are unusually fine, and the tale throughout entrancing. In point of plot, as well as interest, this is one of the very best things that has ever emanated from Mr. Russell's pen.

DEFORMITIES OF THE HUMAN FOOT. By W. J. Walsham, M.B., C.M., F.R.C.S., and William Kent Hughes, M.B., M.R.C.S., L.R.C.P. Cloth; 8vo; pp. 550. William Wood & Co., New York.

This is the only complete and practical work dealing with deformities of the human foot which has appeared since the modest volume of Barwell a quarter of a century since, and is by well known London orthopædists. A notable feature is the pathology, illustrations being directly from dissections and casts, and in consequence more light is thrown upon the subject of talipes and kindred deformities than has ever been possible before; even the pathology of each individual bone in any one deformity is carefully worked out.

The work is especially to be commended from the fact that it treats of deformities from the standpoint of the general surgeon rather than that of the specialist; further, it is concise, practical, and couched in language that is always intelligible.

THE LIBRARY CATALOGUE. Cloth; 8vo; pp. 300. Price, $1.50. Lee & Shepard, Boston.

Owners of libraries will find this a great desideratum—a blank book of convenient size, ruled, with printed headings giving columns for title, shelf, or mark, author, size, date, number of pages, publisher, etc., of each book. A few pages are added at the end whereby may be registered books loaned.

If there were no other advantages, the cost and trouble of the catalogue would be fully compensated in the avoidance of the loss and destruction of many valuable works, of which every one complains as the ill-deserved but too common consequence of kindness in loaning books. By the arrangement of this catalogue any book desired can be found at a glance—and its use will be of great help to any book-owner, be his library large or small.

THE DISEASES OF PERSONALITY. By Th. Ribot. Cloth; 12mo; pp. 163. Price, 75 cents. The Open Court Publishing Co., Chicago.

This is the second American, translated from a fourth French, edition. We have before had occasion to review this volume in the columns of THE MEDICAL AGE, and can only reiterate the favorable opinion of the work previously given. To every student of psychology this brochure is a necessity.

Therapeutic Brevities.

Chloral in Pertussis.—I used to dread whooping-cough, but do not now. I derived little good from the doses of Chloral usually recommended in the text-books, and soon found the drug must be given often enough to render the paroxysm so mild as to be harmless. A child one year old will probably require ten or fifteen grains in twenty-four hours, and perhaps *more*. I give in syrup of liquorice every hour or so, and tell the mother to "*give enough to do some good;* to begin with a moderate dose and gradually increase it until the amount is reached that is necessary to keep the disease in check." Given in this way, children take the drug readily; if they sleep too much the dose can be diminished, but this rarely happens.—It is surprising how much young babies can take without an undue soporific effect; the malady seems to counteract that effect largely. If the mothers would only give enough, the paroxysms would surely be controlled, generally within twenty-four hours; until then I order a teaspoonful of ether poured on a cloth, and let the child inhale it, or a drop of amyl nitrite; both are effectual. I give Chloral to children of all ages, from a few days old up to fifteen years, and have never seen any untoward effects therefrom. *A priori*, one would imagine Chloral to be the remedy *par excellence*, and I believe it is. It is the best antispasmodic; it relieves bronchial irritation, promotes secretion, and does not derange other secretions as do opium and belladonna. If the bronchitis is severe, I keep a jacket poultice around the chest, over this oiled muslin, and then thick flannel over all; there should be enough mustard mixed with the flaxseed meal to keep up a *continuous redness*—I mix dry in about the proportion of twelve or fifteen to one; this can be kept in place two or three days, and when removed is always warm and usually still sweet. Effervescing ammonium citrate, I think, is generally better than the carbonate, as it is pleasant, agrees better, can be given much more freely, and keeps the urine alkaline; I use about equal parts of each. A solution of citric acid is placed in one bottle, and the carbonate in another, and both are mixed in a little water when given.—DOCTOR H. M. HASKELL, in *Medical News*.

Value of Iron Preparations.—The human body contains a considerable amount of iron, varying from thirty to forty-five grains, which is chiefly found in the hæmoglobin of the blood in the form of proteid compound.

Physicians are in error if they suppose iron taken medicinally is applied to the building up of this compound, for recent experiments make it extremely probable that the inorganic iron preparations are not at all absorbed. Thus, Hamburger, in experiments upon animals, was able to collect from the fæces all the iron administered by the mouth. The same result was obtained by Schmiedeberg and his pupil, A. Marfori. There is scarcely a perceptible trace of inorganic iron in the urine, and this is not increased by administration. If iron is not excreted by the urine, the only way in which it can leave the economy is by the intestines, and experiments show that as a matter of fact the body-iron is lost in this way—Bidder and Schmidt established this fact by experiments upon starved cats, and found ten times as much iron in the fæces as in the urine. The same results have been reached by experiments on fasting men. Further experiments show that iron is excreted, not by the stomach or through the bile, but by the intestines. Voit, Marfori and Hamburger alike have shown that inorganic compounds of iron are not absorbed in an appreciable amount by the alimentary tract. It is impossible, therefore, to resist the conclusion that only in some peculiar organic form are ferruginous salts taken up to make hæmoglobin.

I am strongly inclined to disbelieve in the real value of iron preparations. Iron that is absorbed is not necessarily assimilated, while, on the other hand, in about ten days the ordinary food will convey to the organism iron equal to one-third that in the blood. In other words, the food contains always enough iron to supply the needs even of the very anæmic. The apparent utility of iron in therapeutics appears to be largely a matter of suggestion.—Professor Bunge, before the German Congress of Internal Medicine.

"*Mental Disturbance from Iodoform.*"—A female patient, aged fifty-one, who had suffered from epileptic attacks from the age of twenty, but in the intervals had been quite healthy and not physically peculiar, injured her head in a fit, and was treated with a ten-per-cent. iodoform ointment. Twelve days later she became excitable, restless, and confused, and by-and-by had hallucinations. The urine gave a distinct iodine reaction. When admitted to a hospital she talked incessantly, would not answer questions, could scarcely be kept in bed, and complained of plots and persecution. The restlessness increased, and she became cyanotic; the urine contained albumen, but gave a very slight iodine reaction. She then remained quiet for a few days, but again became demented, after which she had another period of quietude followed by another outbreak, which, however, subsided, so that she was then able to be discharged. The condition could not be regarded as a post-epileptic mental disturbance, because of the interval that elapsed between the last attack and the onset of mental symptoms. Manifestly it was determined by the iodoform poisoning acting upon a nervous system predisposed by epilepsy to grave disturbance.—Doctor Oldenberg, in *Neurologisches Centralblatt.*

Horse Nettle in Epilepsy.—Patient, a young man, twenty years of age; very large and strong; always lived on a farm; given to no vices; had epilepsy several months, the attacks occurring at intervals of about three weeks, usually in the early morning, at three or four o'clock, but sometimes in daytime, at the table, or while at his work in the fields; they were genuine epileptic seizures. After some other remedies, he began taking *Solanum carolinense* in ten-drop doses. In about three weeks he had a hard convulsion. The dose was increased to fifteen drops, then to twenty, twenty-five, and finally thirty drops three times a day. There has been no convulsion since September 23d, 1893. He has taken the medicine regularly, during the last six months twice a day, and has had two vacations of two weeks each. It may not have been the *Solanum carolinense* that interrupted the attacks, but if not the coincidence is a strange one. I am inclined to the belief that fairly large doses are more likely to be of use, and have had no complaint of any disagreeable effects. I have used it in several cases, but not in any where I felt as positive of the correctness of my diagnosis, and at the same time had so obedient and faithful a patient.—Doctor E. C. Carr, in *Therapeutic Gazette.*

Vaccination.—Doctor Ortega, who practices medicine on the frontier of Mexico, states that he has observed that most of the North American people are vaccinated by the scraping process, and that a great number of them, although bearing a large and deforming cicatrix, contract smallpox, or can be successfully vaccinated by puncture. On the contrary, among those vaccinated by puncture very few suffer from the contagion, while revaccination succeeds in only a few cases.

As these observations were made on both Mexicans and Americans, the author concludes that the race has no influence on re-

ceptivity, and that vaccination by scraping or scarifying increases the chances of the introduction of the germs of suppuration, which, although they produce inflammation and cicatrices, have nothing to do with vaccine, which they destroy; while, with the puncture made on various places, a very slight opening is offered for the accessory inflammation, and the virus of vaccine has more chance to develop. The vaccination by puncturing is very seldom followed by those large inflammations which accompany, too frequently, the other mode of inoculation.—*New York Therapeutic Notes.*

Obstruction of Bowel.—A man, fifty-four years old, for three months had obstinate constipation. Finally the bowels did not move for ten days; the abdomen was distended and tender; the appetite lost; and a condition of collapse existed, with sunken face, and a small, feeble pulse. The introduction of a long tube proved unavailing. An insulated sound, with a free metallic end, was introduced into the rectum, and a moistened conductor applied to the abdominal parietes, chiefly in the region of the sigmoid flexure. Through this circuit a primary Faradic current was passed, and its force gradually increased until the patient experienced a decided feeling of vibration in the bowel. In the course of the day a copious intestinal evacuation ensued, with wonderful relief to all of the symptoms. During the next two days the bowels acted ten times, and in the course of a week the patient appeared to be quite well. A like result was obtained in a second case, a woman fifty-seven years old.—Doctor Althaus, in *British Medical Journal.*

Death under Nitrous Oxide, Due to Tight Lacing.—More than one fatality from tight lacing has recently been noticed in these columns. In all conditions in which free respiration becomes a necessity if the vital processes are to be carried on, tight lacing means death. Of all states, that in which a patient takes an anæsthetic is the one when absolute freedom of breathing is a necessity. Unhappily but few know this elementary fact in physiology, and hence the sad death of a girl who had taken nitrous oxide gas at a dentist's rooms, and while recovering from its influence had a fatal attack of syncope. The statement is made that her stays were five inches too small for her natural body—a disparity of shape which, we imagine, the dentist might have seen and acted upon before he ventured to give the unfortunate girl nitrous oxide gas.—*The Lancet* (London).

Impacted Cerumen.—When hard, dry, and adherent, and injections of lukewarm water fail, use a solution composed of eight grains bicarbonate of soda in two and a-half ounces of equal parts glycerin and water; drop ten minims of this into the ear, and let it remain ten minutes. Renew the injections of warm water in two or three days, which will generally suffice for the removal of the body. Do not use curette or stylet, except to slightly displace the mass and permit the jet of fluid to surround it. Sometimes an oily solution of two-per cent. salicylic acid may be necessary, followed by injections of alkaline water. When the cerumen has been removed, close the meatus with cotton for from twenty-four to forty-eight hours.—*Manuel Pratique du Traitement des Maladies de l'Oreille.*

Remedy for Coryza.—M. Maurel proposes that the sufferer merely introduce into his nostrils a little cotton wool impregnated with iodoform powder; he also recommends iodoform pastilles. He believes that the impregnated secretions will give off iodoform vapor in passing to the pharynx, and that this hypothetical product will find its way by a retrograde route into the nasal fossæ, where it will attack and slay the white staphylococcus which is the specific agent in coryza.—*Pharmaceutical Journal of Australia.*

[Any agent giving off free iodine in sufficiently dilute state would answer as well, and certainly a more agreeable one than iodoform might be selected—ethyl iodide by inhalation, for instance.—Ed.]

Toxicity of Thyroid—Basedow's Disease.—Béclère presented to the Medical Society of the Hospitals, Paris, a patient illustrating the cure of myxœdema by thyroid therapy. During the course of treatment she accidentally took a large quantity of thyroid gland—92 grains in eleven days. At the end of this time she had developed such symptoms as tachycardia, pyrexia, insomnia, tremor of the extremities, exophthalmia, polyuria, albuminuria, and glycosuria—in fact, a complete picture of Basedow's disease. The writer, therefore, concludes that the latter disease is due to a hypersecretion of the thyroid gland, which may be caused in more ways than one. —*Philadelphia Medical and Surgical Reporter.*

Vaginal Method of Rectal Resection.—Plug the rectum with antiseptic gauze, and disinfect the vagina thoroughly. Incise the pos-

erior vaginal wall and separate it from the liseased gut. Incise the perineum in the niddle line, and isolate, ligate and divide he rectum below the seat of disease. Draw he upper and cancerous portion of the gut hrough the vaginal wound and excise it. The advantages of the method are that here is but little hæmorrhage, the diseased parts can be freely exposed, an opening in he perineum can be easily dealt with, and nlarged glands in the meso-rectum can easily e removed.—Professor Rehn, in *Centralblatt für Chirurgie.*

Passiflora in Epilepsy.—Mr. W. T. B——, ged fifty-four years, wanted something for ervousness; gave him Passiflora, twenty-five rops in a teaspoonful of water, every twenty inutes; three doses completely controlled is nerves and prevented a spell of epileptic ts. This was on December 24th, 1894, and ince that time, whenever he feels that the fits" are coming on, I give him tincture assiflora, thirty drops in a little water, reeating the dose in twenty minutes. Sixty rops is sufficient to control the nerves and revent him from having the fits.—*Homœopathic News.*

Jambul in Diabetes.—J. C——, aged thirty, ad been under treatment for diabetes for wo years, and grown steadily worse. I put im on fluid extract Jambul Seed (P., D. & o.), ten minims, gradually increasing the ose to twenty and thirty minims four times day; at bedtime gave one grain codeine. he decrease in the amount of urine and ugar was most satisfactory; it was not, however, apparent *for about three months.* Today patient is well. It is *the long-continued ction* of Jambul which does the work.—Doctor W. F. Carver, in *Therapeutic Notes.*

Bronchial Adenopathy.—Each morning, fasting, a wineglassful of sulphurated water with little warm milk; cod-liver oil; $\frac{1}{64}$ to $\frac{1}{32}$ rain of sodium arseniate daily, at meal times, ollowed in fifteen days by phosphates. Tarvater or terpin. As calmatives, two to three rops of belladonna tincture and the same uantity of alcoholic extract of aconite root, nd syrup of codeine. Revulsion of the ffected area with iodine or croton oil. If ossible, a season at sulphur springs to comlete the cure.—Jules Simon, in *Bulletin Général de Thérapeutique.*

Iberis Amara.—Candytuft has direct action pon the enlarged heart where there is functional weakness; it lessens the force, and controls violence and irritability. It overcomes the dyspnœa, vertigo, general feeling of weakness, and other reflex symptoms of these cases. In bronchitis, asthma, dyspnœa, dropsy, or jaundice, of cardiac origin, it is one of the best agents, in some cases acting magically. Galen used it in rheumatic affections. A few drops of the tincture is the dose.—*Hospital Clinics.*

Diarrhœa in Fowls. — Diarrhœa is often caused by the drinking-water being left in the sun, and also by soft food in a sloppy condition. If promptly attended to, a case may generally be cured by feeding with a little boiled rice sprinkled with prepared chalk. If there appears a tendency among the birds in the pen to contract diarrhœa, a few drops of tincture of iron should be put in the drinking-water in addition to giving the rice and chalk. — *Agricultural Gazette, New South Wales.*

Ergot in Goitre.—A young woman had a large double goitre of two years' standing, each tumor being the size of a hen's egg. I treated her by means of semi-weekly interstitial injections of Normal Liquid Ergot, beginning with six-minim doses, but gradually increasing to ten minims. With the third injection marked diminution in the size of the tumors was apparent, and at the end of the eighth week the case was discharged cured. —Doctor L. H. Halleck.

Emulsion of Castor Oil.—

Castor oil, 1 ounce.
Powdered gum arabic, 4 drachms.
Saccharine elixir, 20 minims.
Oil of bitter almonds, 2 minims.
Oil of caraway, 2 minims.
Distilled water, to make 2 ounces.

Dissolve the gum in the water, add the oil gradually, and lastly the flavoring.

—*Practitioner* (London).

For Bed-Sores.—

Balsam Peru, 2 drachms.
Elemi ointment, 12 drachms.
Resin ointment, 16 drachms.

Apply daily.

—*Practitioner* (London).

For Ringworm.—Saturate collodion with salicylic acid, and apply over the part affected. One application is usually sufficient.—*Edinburgh Medical Journal.*

Medical Progress.

Points in Diagnosis.—A tendency to sleep with the hands tightly clasped over the head suggests some form of dyspepsia.

"Mercurial" teeth, evidencing long and free dosing with mercury, promise development of lamellar cataract later on.

A dull pain at the back of the head, with lassitude and despondency, is generally evidence of excess of phosphates in urine.

Drooping eyelids that cannot be voluntarily raised, unless following injury or disease causing paralysis of the third nerve, are apt to indicate apoplectic seizure.

A small movable pea-like body in the lobe of the ear (deposit of urate of soda) suggests a gouty or rheumatic diathesis.

When a patient with albuminuria is swollen, the kidneys are apt to be enlarged; when emaciated, these organs are probably contracted. When the feet alone are swollen, the heart is usually involved; when the abdomen only is swollen, the liver is usually at fault.

Acute bed-sores on the sacrum indicate spinal disease; on the buttocks, cerebral fever.

A persistent bad taste on rising in the morning, independent of stomachic derangement, is apt to point to threatening cardiac trouble.

Club-shaped ends of the fingers suggest phthisis, heart disease, or empyema.

Constant burning heat of the body regardless of temperature, combined with lingual tremor and difficulty in preserving equilibrium, is most suggestive of threatening paralysis agitans.

When the muscles of the abdomen flap up and down in consonance with the movement of the diaphragm, suspect lesion or disease of the spinal cord.

When a perfectly sound leg drags after its fellow, and there is inability to raise it from the ground, it is apt to be evidence of some impending disease of the spine.

Inability to stand steadily with the eyes closed, nervousness when descending stairs, raising one leg unnecessarily high to cross it over the other, hesitation in rising from a chair when bidden, are considered as partial evidence of incipient locomotor ataxia.*

Severe pain in or about the heart, with paroxysmal fainting spells and anxiety, if coupled with muffled first sound at the base of the heart, or aortic sound more pronounced than the pulmonary, is apt to be evidence of tru angina pectoris due to organic disease – atheromatous deposit and valvular incompe tency.

Superficial varicose veins on abdomen ar evidence of deep venous obstruction and ma indicate cirrhosis of the liver.

A hard, rigid, inelastic femoral artery—th vessel feeling like a small gas-pipe—suggest gangrene of the foot or leg in the near future

Continuous headache either deeply seate in one spot or referred to the whole cranium and that never yields even temporarily whe at treatment, is probably evidence of organi disease of the brain or its membranes.—Doc tor Louis Lewis, in *Ohio Medical Journa*

Fallacy of Early Rising.—Proverbs ar responsible for a great deal of folly, an none perhaps for more mischief under th present conditions of life than those whic inculcate early rising as a virtue. When th great majority lived in villages, and wer engaged in the cultivation of the soil, earl rising may have been conducive to healt and wealth, if not to wisdom, but even ou early forefathers probably did no more tha make a virtue of necessity. It is said to b natural—that is, physiological—to rise earl and enjoy the beauties of the sunrise; if w ask why, we are treated to various transcen dental theories about the vivifying influenc of the sun, and are told to take example b the birds of the air and the beasts of th field, or so many of them as are not nocturna in their habits. But as a matter of fact, phys iology, so far as it has anything to say on th subject at all, is all against the early-rising theory. Physiological experiment appear to show that a man does not work best an fastest in the early morning hours, but, o the contrary, about mid-day. The desire t rise early, except in those trained from youth to outdoor pursuits, is commonly a sign, no of strength of character and vigor of body but of advancing age. The very old ofte sleep much, but they do not sleep long. A long, deep sleep, the sleep of youth, require for its production a thoroughly elastic vascu lar system. The stiffening vessels of age ar not so completely nor so easily controlled b the vaso-motor nerves; hence shorter sleeps Thus, paterfamilias, who goes to bed at 11 P.M., wants to get up at 5 or 6 A.M., and look upon his healthy son, who prefers to lie till 8 as a sluggard. When this foolish interpreta tion of a proverb about the health and wealth to be got from early rising is combined wit the still more foolish adage which says o sleep, "Six hours for a man, seven for a

*These evidences are very far from being infallible.—Ed.

roman, and eight for a fool," then we have a icious system capable of working great mis- hief to the young people of both sexes. here is a tendency, greatly encouraged in owns by the spread of cycling, to curtail nduly the hours of sleep. Parties of young ien and lads are to be met careering about ie streets at midnight. They would be far etter in bed. They have probably to be in ieir offices or shops by 9 A.M., or even ear- er, and when time is deducted for supper, oilet, breakfast, and the journey to the place f business, it is evident that the hours for leep cannot exceed six, or at most seven. hese young men are no doubt encouraged y the silly adage quoted above. There is a isposition in town youths to overdo outdoor xercise; the cycling club "night spins" are istances in point. As Nordau has said, with great deal of truth, the town-dweller of iese last decades of the nineteenth century iffers from nervous fatigue, and is so ill ad- ised as to make his very recreations sources, ot of recuperation, but of increased exhaus- on. If our forefathers were early risers, iey went, also, early to bed. It would be ell for the rising generation if it paid more eed to this part of the proverb.—*The Lancet.*

REVELATIONS OF CHEMISTRY IN THE BODY. -The mysterious influence of mind over body as given rise to a new department in medi- ne, and but recently scientific experiments ave been made in order to investigate what called the psycho-physical, or in simpler nguage the soul-physical, phenomena.

For instance, two kinds of perspiration are ow recognized. Exercise gives an absolutely ealthy moisture to the body; but the sud- en, cold perspiration of a person suffering om a sense of guilt has its own chemical roperties A little of this brought in con- ct with selenic acid produces a pink color, hich cannot be obtained from the perspira- on caused by any other emotion.

Some time ago, in a fit of rage, one boy t another. The wound soon became dan- erous and showed signs of acute poisoning -like rabies. The child's life was barely ved. It has been discovered that anger anges the chemical properties of the saliva, that it becomes a poison dangerous to life. It is well known that the mother's intense ger or grief will change her life-giving milk to a virulent poison. Surprise has caused ath and madness. Emotion, therefore, is ther stimulating or depressing. It gives e or takes it away. Worry, fret, discon- nt, unhappiness, dishonor, anger, petulance, ch produces a definite effect upon the sys- tem, that acts deleteriously like a poison, and exhausts the body. This is as active in its own way as prussic acid, and may be chem- ically recognized.

Professor James of Harvard, an eminent authority in the mental sciences, says: "Every small stroke of virtue or vice leaves its never so little scar. Nothing that we ever do is in strict literalness wiped out."

As every sinful indulgence makes its own poison that depresses the system, so "every good emotion," the physiologist assures us, "makes a life-promoting change." Goodness, cheerfulness, kindness, contentment, have their corresponding physical value and act as antidotes to poisonous irritants, and so give strength.

There are other ways of ruining the body besides getting drunk, yielding to vulgar indulgences, or acquiring the fast-increasing cigarette cancers. A half-hour's fit of hatred, or anger, or uncontrollable grief may under- mine the constitution, and has caused death. Anxiety, envy, discontent, unchristian ambi- tion, may be the subtle poison which the physician tries in vain to eradicate from the ailing body.

The great Hebrew seer, whose writings are becoming better appreciated as time goes on, anticipated a wonderful chemistry when he said: "As righteousness tendeth to life, so he that pursueth evil pursueth it to his own death."—*Youth's Companion.*

THE SIMULATION OF DEATH BY FAQUIRS. —Herr Kuhn not long ago presented a com- munication on this subject to the Anthropo- logical Society of Munich. He had the op- portunity of personally observing two cases, as to the genuineness of which he had no doubt whatever. One of the faquirs referred to had been buried alive for six weeks, the other for ten days. The condition which the faquir has the power of producing artificially is in all respects identical with the cataleptic trance. The faquirs, who are all hysterical subjects of a very pronounced type, put them- selves through a regular course of training before the performance, weakening them- selves by semi-starvation, taking internally various vegetable substances known only to themselves, keeping their bodies motionless in the same position for several hours at a time, etc. The details of this preparation are given in the *Hathayoga Pradipika Stráitmá- râmas*, which has been translated by Walter. When the faquir has by these means got him- self into the proper condition, he has only to lie down in one of the positions enjoined by the sacred books, and fix his eyes on the end

of his nose, to fall into a state of trance. The faquirs are also believed to use haschisch (*Cannabis Indica*) for the purpose of lessening the force of respiration; that hypnotic agent, associated with other vegetable substances and used in a special manner, is believed by them to supply the want of both air and nourishment. At the beginning of the trance the faquir has hallucinations, hearing heavenly voices, seeing visions, etc. Gradually, however, consciousness becomes annulled, the body becomes rigid, and, as the faquirs themselves say, "the spirit rejoins the soul of the world." In short, the condition is one of auto-hypnosis in hysterical subjects specially prepared for the experiment. —*British Medical Journal.*

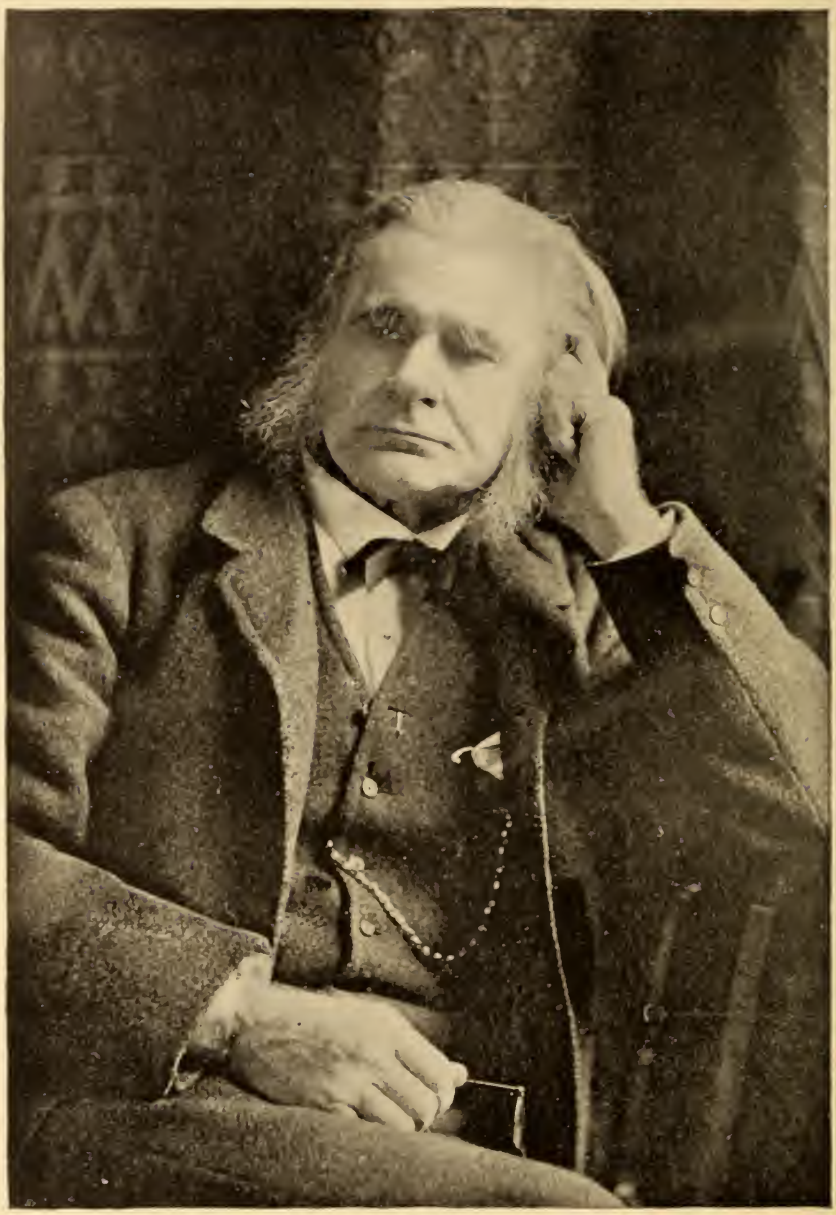
Dispersible Tumors.—Many a young girl has become frightened by the appearance of a tumor in the breast, which she at once thinks is a cancer. Doctor Herbert Snow has been able to collect a number of cases in which tumors of the mammary glands of young girls between fourteen and twenty-five were made to disappear or to become almost unnoticeable by massage and the use of certain ointments. The most important point, of course, is to make the diagnosis between a benign tumor and a cancer. Foremost among these benign tumors is what Doctor Snow calls the "fibroma of adolescence." A young girl who has worn a tight corset, which she persistently denies having worn, comes for the treatment of a small nodular tumor sometimes scarcely more perceptible than a slight thickening of the breast tissue; there is usually little pain except what is imaginary. Such growths are generally the result of a defective mammary development and are caused by tight lacing.

Besides massage and loosening of the corset, an ointment of iodide of lead and in some cases the administration of bromide of potassium will soon bring about disappearance of the tumor. It is just here that unscrupulous operators remove the tumor, or perhaps the breast, in order to get the credit of curing a cancer.—*Maryland Medical Journal.*

A Case of Sextuplets.—Vassali, in the *Gazzetta Medica Lombarda*, gives an account of the birth of six children at one birth, which is said by Von Herf (*Fortshritte der Medicin*) to be the first well-authenticated case on record. The patient, thirty-six years of age, during the early months of her pregnancy grew anæmic, weak, and complained of chilly feelings; motion was not felt. In the fourth month the abdomen had grown as large as in ordinary pregnancy at full term, so that the woman daily expected confinement. On the 115th day of gestation, while straining at stool, the membranes ruptured and a foot prolapsed—no pain having been felt before this incident; and a fœtus was delivered. The next morning pains began, with chills, flowing, rise of temperature, and vomiting, and it was decided to terminate the pregnancy, as miscarriage was now inevitable. Accordingly the membranes were ruptured, a foot brought down, and a second fœtus delivered. A third bag of membranes presented, and a third fœtus was delivered; and so on till the fifth. This process lasted two hours, when an endeavor was made to hasten what was thought to be the third stage of labor, but the attempt to remove the placenta revealed a sixth amniotic sac and fœtus. All the fœtuses were born alive, and moved vigorously; the sexual organs were differentiated, four being males and two females. The large single placenta, bearing the six amniotic sacs, was unfortunately so lacerated that further investigation of it was useless. The specimen is preserved in the museum of the Obstetrical School at Milan. —*Boston Medical and Surgical Journal.*

Shock in Castration.—That severing the cord in excision of the testicle produces any shock to the system, has been recently denied, but I would like to add an account of a recent observation made while administering ether to a patient undergoing double castration. The left cord was first clamped, then severed; at the placing of the clamp nothing was noticed, but at the moment the cord was cut the radial pulse, which up to that time had been regular, stopped, missed two beats, and then proceeded as before. A little later the cord upon the right side was clamped, and a well marked convulsive movement of the right arm and side was noticed. At the moment the right cord was severed the radial pulse stopped, missed five beats, fluttered for a few seconds, and then became regular as before.—Doctor W. O. Hermance, in *Philadelphia Polyclinic.*

Albuminuria in Typhoid Fever.—Doctor André, of Toulouse, thinks that albumen always appears in the urine of typhoid patients, especially during the earlier stages of the disease, and as this is a constant symptom it becomes an important factor in arriving at an early and correct diagnosis.—*L'Union Médicale.*



THOMAS HENRY HUXLEY

The Medical Age.

VOL. XIII. DETROIT, JULY 25th, 1895. NO. 14.

Original Articles.

A STUDY OF THE NEWER OPERATIONS FOR HÆMORRHOIDS.

BY EDMUND ANDREWS, A.M., M.D., LL.D.

Eighteen centuries ago the Roman physician Celsus treated bleeding piles by cauterizing them with hot quicklime and afterwards puncturing with a needle, whereby he says, "the heads [of the piles] being burned, a cicatrix is formed, which prevents the outflow of blood." Improvement followed.

More than a hundred years ago Sir Benamin Bell, of Scotland, discussed the question of ligatures, excision, and actual cautery, which various writers long before him had advocated for piles.

During the last fifteen years many changes have been introduced, not always real improvements; and finally organized troops of quacks have appeared, trying to achieve notoriety in this branch of practice.

Among recent surgeons Mr. Allingham, of London, made decided improvements on the old plan of ligation. Noticing that the chief artery of each pile came down on the upper surface, while the nerves of sensation entered on the lower, he seized the pile, drew it up, and, nipping its lower border loose, dissected it upward some distance, and finally tied it high up. This prevents hæmorrhage, and by severing the chief sensory nerves benumbs the sensibility and prevents pain. I have been in the habit of either cauterizing the wound below the knot with chromic acid to prevent septicism, or closing it with catgut sutures to prevent pathogenic microbes from entering the submucous connective tissue.

Professor Merrill Ricketts, of Cincinnati, has devised the following improved plan of ligation: Having disinfected the parts, he takes a semicircular needle armed with antiseptic silk, and, inserting it near the lower border of the piles, passes it upward between the mucous membrane and the sphincter, and, encompassing a segment of the enlarged veins, brings it out at the same opening, and ties it firmly, leaving the ends hanging out.

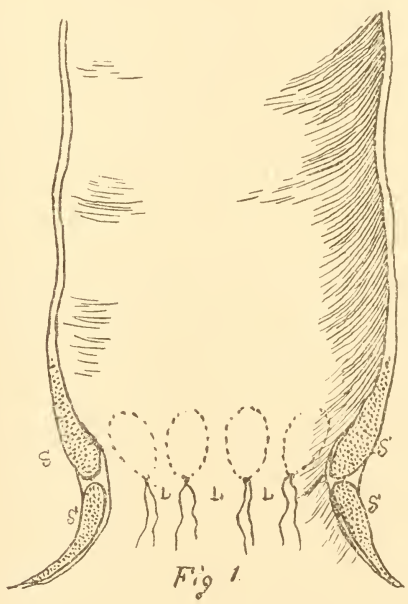


Fig. 1.

Professor Merrill Ricketts' Submucous Ligation, showing the interior of the rectum. SSSS, the divided sphincter muscles. LLL, the ends of the ligatures hanging out of the needle punctures. The dotted loops show the course of the ligatures beneath the mucous membrane.

He repeats this at regular intervals around the gut, so that most of the veins are included in the knots. No incisions are made, and the operation is wholly submucous. I have not tried this plan yet, but think it will be found an excellent one.

Professor Esmarch, of Kiel, Germany, the famous inventor of Esmarch's bandage, writes me that he seizes each pile and boldly snips it off; then ties any spurting arteries; finally closes the wounds with catgut ligatures, doing the whole with antiseptic precautions. He

treats all his cases in this way and prefers it to any other method.

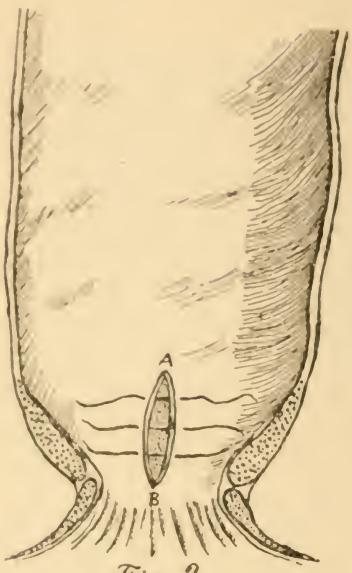


Fig. 2.

Esmarch's Method of Treating Piles. A B, the place from which a pile has been snipped out, with the stitches inserted and ready to be tied to close the wound.

An eminent surgeon named Smith, in London, gave special attention to the use of the clamp and cautery, and became the chief advocate of that method; he was one of the three different operators to whom the invention of the ordinary pile-clamp is attributed —the real inventor, however, was a Dublin surgeon. Smith's influence rescued the cautery from the partial oblivion into which it had fallen, and greatly increased its popularity. The invention of the thermo-cautery and the electro-cautery increased the facility of applying the heat.

About fifteen years ago a young physician in central Illinois, named Mitchel, conceived the idea of destroying piles by injecting into them with a hypodermatic syringe a strong solution of carbolic acid dissolved in oil. This plan was sold out as a secret remedy to numerous local and itinerant "pile doctors" all over the country; and hundreds of thousands of patients received the treatment, and in many cases with benefit. When the wave of its popularity was at its height, I discovered the secret in consequence of a quack getting drunk and divulging the method, and thereupon I published a circular in eight medical journals, giving the formula and adding a request to all physicians to report to me their observations on the results of the treatment in their vicinity; I also wrote to many of the quacks themselves and to a large number of true physicians. As a result I received about three hundred letters, and reports of thirteen deaths from the method, and a great number of other incidents. I was disappointed, for I had hoped the plan might prove valuable; but it was the old story over again that the injection of coagulants into enlarged veins is dangerous on account of embolism and abscesses; moreover the cure was found in many instances to be temporary. Its popularity declined, but many itinerants (now calling themselves "rectal surgeons") still practice it.

About ten years ago Mr. Whitehead, a reputable surgeon of Manchester, England, adopted the operation which bears his name. His plan was to dissect out the whole mucous membrane of the anus and lower rectum, taking with it the piles and all the hæmorrhoidal veins, and also the nerves and most of the submucous connective tissue. A ref-

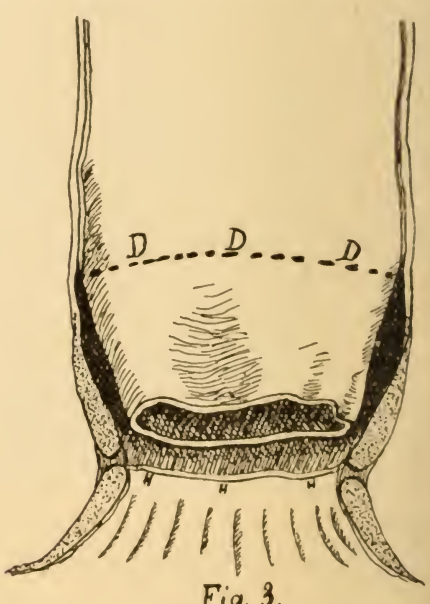


Fig. 3.

Whitehead's Operation, showing the cuff of loosened mucous membrane before it is cut off. H H H place of the lower circular incision. D D D, the dotted line shows the place of the upper incision

erence to Fig. 3 will make the plan clear. He makes a circular incision entirely around the anus at the junction of the mucous membrane and the skin, then dissects upward, separating the veins, piles and membrane from the inside of the sphincter until he gets higher than the piles, leaving the bloody mass hanging loose inside the sphincter. Next he cuts off the mass at the top, ties the arteries, and removes the whole. The cut edge of the mucous membrane above is then pulled down and stitched to the cut edge of the skin below to cover the raw surface and produce a union by first intention. Unfortunately the stitches often give way and the mucous membrane draws up, leaving a granulating tubular ulcer, which contracts as it heals and produces a stricture.

There are other evils. By consulting Fig. 4 will be seen some of the reasons of their occurrence.

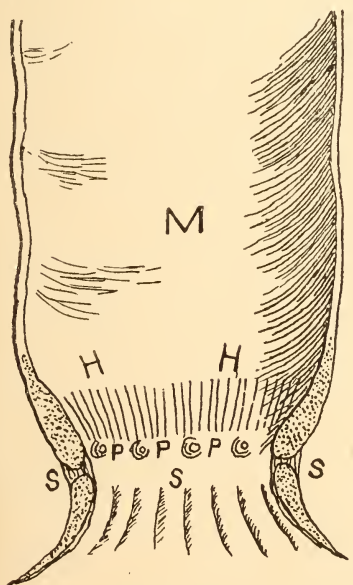


Fig. 4

Tactile Mechanism of the Rectum. M, mucous surface of the rectum. H H, the columns of Morgagni. P P P, the row of papillæ below the columns of Morgagni. S S S, Hilton's white line, otherwise called the verge of the anus; it is marked by the junction of the skin and mucous membrane and by the junction of the internal with the external sphincter.

About an inch above the verge of the anus the mucous membrane begins to be like all the gut above, nearly destitute of nerves of sensation, and worthless as an organ of touch.

The columns of Morgagni are a circle of parallel or rather of converging ridges, small and about a third of an inch long. They are tactile organs—or at least are sensitive to touch. The grooves between them lodge a reserve of rectal mucus to lubricate the descending fæces.

The row of small papillæ which surround the opening just below the columns of Morgagni are tactile organs of high sensibility. Each has an artery and a nerve, at its base a little ganglion-like enlargement of the nerve. These papillæ and the adjacent mucous membrane just above and below are exceedingly sensitive and are the seat of a tactile special sense whereby the person is informed of the presence and progress of any mass of descending fæces. It is supposed also that the papillary nerves act in a reflex manner to excite or control the muscles of retention and of defæcation, so that these acts do not require a constant exertion of mental attention and will force. Hence these papillæ are very important.

The line of junction of the internal and external sphincters, and of the mucous membrane with the skin, is commonly called Hilton's white line.

Now Whitehead's operation when thoroughly performed sweeps away every vestige of this tactile mechanism, which is the seat of an important special sense, and brings down in the place of it a mucous membrane from above which is almost destitute of sensibility; hence many of the patients complain that they cannot tell when an evacuation of the bowels is impending, and only know of it when they feel it in the clothing. Others get a short warning, barely enough to enable them to rush to the closet in time. If the operation has been less deep, the disability is not very bad. Some have a total or partial paralysis of the sphincter, and an incontinence of the fæces.

I have opened a very extensive correspondence on this subject with eminent surgeons in this country and Europe. The combined result is that one hundred and ninety-seven cases of bad results have been reported to me, in some of which the patients were reduced to the condition of miserable wrecks.

The original "pile doctors" sought to raise their dignity by calling themselves "rectal surgeons." When Whitehead's operation was published they greedily took it up, modified it slightly by pulling down the mucous membrane and making the upper circular incision first and the lower after it, and pompously named it the "American operation." They also began to attend to the other orifices of the body, and at present are calling themselves "orificial surgeons."

There is no material difference between the operations. The results of both are often bad, even in the best of hands. Doctor Kelsey, of New York, a standard author on rectal subjects, estimates that even in skilled hands ten per cent. of these operations turn out badly. He says he has a constant revenue derived from repairing the mischiefs done by the "American operation."

Professor Matthews, of Louisville, another standard author, says Whitehead's idea of the necessity of removing the whole pile-bearing area is chimerical. The ligature effects a cure in all these cases, and is much simpler and freer from danger. The so-called "American operation" is merely a modification of Whitehead's, and the necessity of doing it never exists except in an ill-balanced brain. I have seen a great number of physical wrecks from this uncalled-for "surgical procedure." Professor Moullin, of London, writes me that the operation is rarely done in that city. I find about four-fifths of American and European physicians opposed to its performance, and in my judgment its liability to bad results even in good hands will cause it rapidly to pass into oblivion.

2520 Prairie Avenue,
Chicago, Illinois.

NOTE ON MENOPAUSAL POLYSARCIA ABDOMINALIS.*

BY W. P. MANTON, M.D.

Among the many phenomena presented at the climacteric period, there is one which is of particular interest to the abdominal surgeon, in that a perfectly normal and physiological process which takes place in the larger proportion of women at this time is sometimes looked upon as a pathological condition amenable only to surgical interference. I refer to the rapid, often sudden, accumulation of fat in the abdominal parietes.

The great frequency with which this condition is met—according to the much-quoted statistics of Tilt, fully one-third of all women being thus affected—and the apparent simplicity in differential diagnosis between it and morbid new-growths, would seem to render any mistake regarding the nature of the abdominal enlargement almost impossible; but as patients have come to me within the past few years with the already made diagnosis of "ovarian tumor," I am led to believe that either the condition is not sufficiently understood, or methods of differentiation are often superficially or carelessly applied.

There are only a few pathological states which are at all likely to be confused with fat-accumulation in the parietes, viz.: true lipomata; desmoid (fibroid) tumors of the abdominal wall; encysted peritonitis; hydatids of the peritoneum; and, possibly, new-growths of the omentum. A little care in physical examination will readily distinguish any one of these from diffuse fat-accumulation in the belly-walls.

Women affected with abdominal polysarcia often frighten themselves into the belief that they are the victims of a malignant tumor, and the assurance of the physician that the condition present is a perfectly normal one, devoid of danger, which will gradually disappear as the fat is reabsorbed to be deposited in other portions of the body, will bring with it the greatest mental relief and satisfaction to the patient.

32 Adams Avenue west,
Detroit, Michigan.

*Read before the Michigan State Medical Society.

A PSYCHOLOGICAL MYSTERY.*

BY MRS. BERTHA W. ANTROBUS.

A few years since, had it been asked if I believed in ghosts, I would have laughed and

*Strange as it may seem, this paper deals with an actual occurrence. Readers of THE MEDICAL AGE will remember the author's father, Doctor E. D. Worthington, had a somewhat similar experience.—ED.

replied: "No—most decidedly not." But now, although the same query might provoke a smile, a like reply would not so positively follow—for, explain what I both saw and heard on one occasion I cannot, but will simply state the facts as they occurred:

In the spring of 1891, my husband having been called away for some months, my sister and self, for the sake of our children, decided to rent a cottage in the country, and, hearing of one that promised to be suitable a short distance from the city of L——, it was engaged, arrangements being made by mail with the landlord.

Naturally we looked forward with no little curiosity to the first view of the region which was to be our summer home, and during the journey the children were all in great spirits, especially Tom, my eldest boy, aged ten, whose importance culminated when we reached the terminus of our journey and he was allowed to point out the different pieces of luggage to the individual engaged to transfer our goods and chattels.

The new residence being only a short distance from the station, we decided to walk, and after an experience of several hours in the heated cars found the shady lanes and bracing country air very refreshing, and mutually agreed a wise choice had been made in selecting "The Hermitage," as the new residence was termed. Indeed, at first view it seemed a restful spot where we might pass a few months most happily.

The sun was setting behind the grove back of the house as we passed through the little gate along the grass-grown path which led to the hall door. The dwelling was small, and had evidently been built as a summer retreat, and the long Venetian windows opened upon a vine-covered verandah. Instituting further survey of our quarters, we inspected the rooms on the ground floor. From the small square hall containing the staircase opened two doors; the one at the end, and facing the entrance, revealed a large, bright and airy kitchen; that on the right a long room with an archway in the centre, the back part having been evidently used as a dining-room, as a door also opened from it into the kitchen. Upstairs was a small passage and four good-sized sleeping-rooms.

We distributed ourselves as follows: My sister took one of the front rooms; I, with my baby, the opposite; Tom, one of the back rooms, and the two little girls the other.

Notwithstanding gayety and exuberant spirits, all seemed to experience a feeling of depression as soon as the house was entered, though none liked to admit it, fancying it the result of a fatiguing day upon the train. I hastened to boil the kettle, thinking we would feel better for some refreshment, and likewise sent Tom to the nearest neighbor for a jug of milk. When he returned I fancied he looked pale, and also while eating supper that he often started and looked behind as if expecting something. Soon we bundled the children off to bed, and, after chatting awhile, my sister and self also retired—but not to sleep, however, since, try as I might, sleep seemed impossible. Finally I lighted a lamp and began to read.

After a while, feeling drowsy, I turned down the light, shaded it, placed it where it would not receive the draught from the two windows, and settled down again for the night. How long after I do not know, but suddenly I found myself sitting up in bed, the lamp out, and the room in perfect darkness except where a ray from the moon shone through the passage window between my apartment and that of my sister. Just then I saw her, as I supposed, leaving my room, and immediately remarked: "You gave me a great start, Annie. Why did you put out the light—did it disturb you?" As she did not reply, I spoke again, and, still receiving no response, struck a match and lighted the lamp, in so doing noticing that the chimney was quite cold, hence the light must have been out for some time. I then passed to Annie's room, but, strange to say, found the door shut—we had arranged before retiring that it should stand open. I gave a gentle tap before entering, and found Annie asleep, but she instantly awoke and asked why I had shut the door after having agreed to leave it open. I replied I had not closed it, whereupon she responded in sleepy tones: "Most likely it was the wind."

I now looked in on the children; the little girls were sleeping quietly, but Tom was wide awake and at once remarked: "I am glad you brought the lamp with you this time, mother. But why do you not go to bed in-

stead of walking in and out of my room and putting your cold hand on my head? My head does not ache! Go to bed. I will call you if I want you, but don't come unless, for it keeps me awake."

Fancy my astonishment! I had not been to the boy's room before, but for fear of rendering him nervous—though he had never shown signs of nervousness before that evening—I did not care to tell him so.

Back in my apartment, I threw myself on the bed, but it was quite daylight before I fell into a heavy sleep, from which I was only awakened by the romping and shouts of the children.

With the advent of bright sunshine I succeeded in throwing off my morbid feelings, and all went well through the day, and for that matter for several days; but every night regularly and at the same hour poor Tom would experience a most dreadful nightmare —something never known to occur before.

One day he told me of a lady with a dark ulster over a light dress who frequently joined him in his walks, and once came quite up to the door, but had never spoken. He saw her for the first time the day of our arrival, when he went for the milk. This confidence was brought about by his aunt inquiring who was the lady in the dark ulster she had seen walking up the garden path with him.

A few mornings after this I was busy in the kitchen when the door opened and some one came in. Supposing it was my sister, who was out for a walk, I did not turn around, but asked how far she had been. The only reply was a heavy sigh, when I turned just in time to see closed the door leading into the hall, and likewise obtain a glimpse of a woman's hand upon the knob. Immediately followed the opening and closing of the outside hall door. I ran at once to the window, but could only see Annie leisurely sauntering up the little garden path. I met her at the entrance and inquired if she had encountered any one or passed through the kitchen, but to both queries obtained a negative. As the children were all off to a picnic a few miles away, it could not have been one of them. We searched the house and grounds in vain, and then Annie laughingly suggested it might be our friend in the dark ulster, who certainly would find the garment somewhat uncomfortable for so warm a day. We both agreed, however, not to mention the circumstance before the children, particularly as we had been quite anxious about Tom for some days past, and had decided to send him on the following day to some friends at L—— for a couple of weeks.

The evening being somewhat cool, a fire was made in the kitchen, and after supper the children with their toys and books gathered around the table, which I had drawn into the middle of the room. Leaving them all busily employed, my sister and I passed upstairs to pack Tom's valise. Soon hearing one of the girls call, I returned, when the eldest remarked: "Why, mother! how quickly you have dressed yourself! When I saw you coming down in your night-dress and go into the parlor I asked if you were going to bed. What made you undress and dress up again?"

"And mother!" added the younger, aged four, "why did you go up and down stairs so funny and go into the parlor and beckon to Tom?"

How could I answer these questions? Neither Annie nor I had left the chamber until I heard the call. I omitted to say there was no light in the hall except as reflected from the kitchen, and this latter so dim that while a figure could be seen, yet the individual could not be recognized.

It had now become our regular habit to leave a light burning in the hall upstairs every night, but often, of a morning, it was found extinguished without any apparent reason, neither wick nor oil being defective.

Tom went to L—— the next morning, and never once during his absence was troubled by nightmare. Things went on very much the same with us while he was away, and on his return we were beginning to feel it would be impossible to remain the three months for which the house was engaged—we had then occupied the cottage about six weeks.

The children were all delighted to see Tom, who arrived just before they retired, and he followed suit soon after. At midnight, the same hour he was generally disturbed before he went to L——, he experienced a very severe return of nightmare, which lasted nearly an hour, after which he fell into heavy sleep.

From this time on things became worse. Doors would be opened and shut and lamps extinguished, perhaps some one awakened by slaps on the face. Even the younger children, who before had noticed nothing, now began to notice these strange occurrences, and ask who was the lady who cried in Tom's room every night.

After another week we could stand it no longer, so packed up and moved to the village hotel. The night before leaving, however, hearing Tom moan, I passed into his room, when, to my horror, I saw the strange woman sitting on the bed with her arm thrown around him. She was apparently in night-dress, with an ulster or wrapper over, her long hair straight and lank down her back. As I entered she raised her arms overhead, and with a long low wail vanished. I dropped into the nearest chair too weak to stand, and was there found by Annie, who had been awakened by the unearthly cry. Meantime Tom, who had been weeping and moaning without waking, turned over quietly with a sigh of relief and thereafter appeared to rest peacefully.

A couple of days following the removal to the hotel, while out walking, we stopped to beg a drink from a pleasant-faced elderly woman engaged in hanging out washing. After "passing the time of day," as the saying is, we inquired how long she had resided in the village, the response being: "Girl and woman, nigh onto fifty years."

Did she know anything of the people who had formerly occupied "The Hermitage?"

"Aye! that do I," she replied, "and a gruesome place it is since the poor forsaken lady died there come these two years next month." I then asked if she would relate the circumstances connected with this lady's death, and in what way the place had become gruesome. Whereupon she sat down upon a bench and began a narrative which, as near as possible, I give in her own words, though necessarily somewhat abbreviated:

"I know you are the ladies who have been living at the cottage the past six weeks, and have been surprised that you remained so long, since the former tenants stayed only four days, and went straight to the train without telling any one the reason for leaving so suddenly—and they, like yourselves, had rented the place for the summer months. This was a year ago.

"A month before you came, a lady and her little boy came to look at the cottage with a view to renting it, but in less than an hour returned and inquired when the next train would leave for L——. I inquired how she liked the cottage, when she replied: 'Not at all,' and that nothing would induce her to enter the house, for she felt sure it was haunted or some curse was upon it. She had no sooner entered the house by the front door than she experienced a feeling of oppression that continually increased until the back door was reached, when she left the house that way, all the time feeling conscious some one was following her. I did not laugh, and no more will you when you hear what I have to tell:

"A little better than two years since, a gentleman and lady with a little boy, about ten years old, came to live at this cottage. The gentleman claimed to have business in the city which kept him a great deal from his family, though he frequently came to see them and sometimes remained for a couple of days. The lady was very delicate, did not often go out, but when she did was always accompanied by the child, to whom she seemed most devoted. I used to go to the cottage to wash, scrub, and do odd jobs, so that is how I came to know these particulars.

"After they had been there a few weeks the gentleman came from the city and went back the same day, taking the boy with him. A day later he again returned, but alone.

"Whenever I went to the house after this the lady was always in tears; her health grew worse and she failed rapidly, seemingly pining for her child.

"One evening as I was coming from the cottage I met Mr. ——, accompanied by another lady. He paused to ask me how his wife was, when I informed him she was very ill. He responded that he hoped good nursing would soon bring her around, and for that purpose he had brought her sister to visit her—I must say I could trace no family resemblance between this lady and the invalid, nor did I like the looks or general appearance of the former.

"After this the gentleman remained at the

cottage more constantly, and he and the strange lady were often together of an evening walking in the lanes or seated in the garden; and from this time, for about three weeks, I never saw the sick lady when I went to the cottage. Then one evening, as I took home the washing, the gentleman and his sister-in-law being at supper chatting pleasantly, I set down the basket and went quietly upstairs, where I found the poor invalid suffering great pain and very cold. She seemed very glad at my incoming, and asked that I should not leave her. I wrapped her in an ulster which was hanging on the wall, ran downstairs and told Mr. —— that his wife was very ill and that he should go for a physician at once, which he did: but the poor lady died in great agony before he returned. She clung to me and tried very hard to tell me something about her boy, but I could not make out what she wished to say, as her breathing was so short and her voice so low and weak.

"I shall never forget the look of misery on the poor lady's face when she saw I did not understand her. She died with her head on my shoulder, just before her husband arrived. He said the doctor was away and would not be home until morning. He telegraphed at once to L—— for a casket, which arrived next day, and the whole party left on the noon train.

"That is all I know about them, but before leaving Mr. —— paid liberally and engaged me to clean up the place; and glad I was when the work was done, as all the time I fancied I heard the poor lady's moans. It is no wonder to me she cannot rest quietly in her grave, as, at the time of her death, and for some time previous, she was troubled about her boy, evidently not knowing whether he was happy and well treated or not."

We thanked the old woman and left. On going over the whole affair as told, my sister and I agreed with the old woman that the poor lady was before her death sadly troubled as to the fate of her child, so much so that her spirit could not rest but came back to her old home (if such a thing is possible) where she had lost her boy, hoping to find him again; and, not seeing him, she liked to be near Tom, who was about the same age as her own child when he was taken from her.

Can any one give a solution to the above mystery? I admit it is impossible for me to do so, so will conclude with the assurance that the narrative is exactly as the circumstances occurred, the names of persons and places only being withheld.

Sherbrooke, P. Q.

PSORIASIS.*

BY DOCTOR J. R. KESTELL.

In this brief paper I shall present nothing as to symptoms, history, or pathology, except as they refer directly to the case in point.

In August of last year, Miss G——, 19 years of age, placed herself under my care for a trouble I diagnosed as chronic psoriasis —a diagnosis which was corroborated by a New York specialist, she having made a two months' sojourn in the Eastern metropolis three months subsequent to my diagnosis.

This lady had been affected to a greater or less degree during five years, and had been treated by several practitioners with only partial relief. As a result she was thoroughly discouraged and preferred death to living. Although the conclusions I arrived at were not encouraging, at the outset, I resolved to pay strict attention to three factors in the case, viz., functional activity of the alimentary canal, ditto of skin and of kidneys, and thereby, if possible, so improve these conditions that oxydation should be promoted and abnormal products of blood removed.

Her history, to be brief, was not good, the origin of the trouble being distinctly syphilitic, manifestations of which were very apparent in one of the parents. Her entire head was one mass of scales to the edge of the hair, and on forehead and neck also; the lower lobes of the ears were in a terrible condition. Extensor and flexor surfaces of arms exhibited patches, and a few were to be seen on the legs.

First of all I advised her to diet—encouraged the use of vegetables, milk, etc., forbidding eggs, meat, coffee, wine, and beers.

During the first month I prescribed Blaud's pills, improved, *before* meals, Fowler's solu-

*Read before the Wayne County Medical Society.

tion *after* meals. Second month I ordered pills of calcium sulphide, one-half grain each, before meals, with the arsenical solution and phospho-muriate of quinine after meals; twice daily she took a mixture of spirit of mindererus, digitalis, and jaborandi, as a diaphoretic and diuretic; and once a week a capsule of calomel, bicarbonate of soda, and aloin, followed next morning by a saline laxative. At commencement of second month I also ordered her, three evenings a week prior to retiring, to take hot bath, with hot drinks; likewise to apply cod-liver oil to the affected parts, keeping the latter covered all night with oiled paper, and next morning, after scales were removed as far as feasible, to apply an ointment of pyrogallic acid, and, when itching was most severe, applications of solution of chloral hydrate.

At the end of the second month her general health was improved, but the skin trouble showed little betterment. While continuing internal medication as before, I tried applications of an ointment of mercury subchloride, iodine, and lard — after epidermis was removed with wet bird-sand this ointment was well rubbed in. In about two hours after the first application of this ointment, there suddenly developed a condition of suffering so great that she became hysterical; the skin was dry, hot, and very much puckered up. I immediately gave a hypodermatic injection of pilocarpine muriate, one-eighth grain, and subjected her to the action of steam, when relief soon followed. I repeated these procedures twice a week, and three times had to repeat the pilocarpine injections; but with the sixth application no inconvenience was manifested and improvement supervened. She now made such rapid progress toward recovery that in the course of four months little was left as evidence of disease, and for the first time in nearly five years her skin was in good condition; with the improved health she also gained in weight.

Although at times a little evidence of trouble appears, appropriate attention by way of inunction and treatment causes it to disappear. Every alternate month she continues tonic treatment, which I advised to be continued for some time; she also pays strict attention to diet and habits.

Detroit, Michigan.

PNEUMONIA.

BY DARIUS L. POWE, M.D.

This is a disease which, if once seen and the symptoms closely observed, cannot be mistaken for any other. Confusion may possibly arise in the first stage on account of its close resemblance to acute bronchitis or acute pleurisy, but the misleading symptoms disappear when the malady is fully established. The tendency, in the majority of cases under favorable hygienic environment, is toward a spontaneous recovery; nevertheless, annually a large percentage die, regardless of our boasted scientific medication. A glance over the death certificates of all countries, and especially of the United States, shows that a vast number of the great and brilliant lights in the medical profession have been extinguished by this disease.

More extensive investigation is necessary to fully confirm the ætiology of the disease. The theory that sudden changes in temperature is the principal cause cannot be accepted. The most extreme exposure in all kinds of weather does not always result in pneumonia —which is evidence that a certain condition of the system is essential to its inception. In my judgment, unhealthy conditions of the skin, the result of improper care, rank first among the predisposing causes.

There is no disease of any magnitude that runs a more definite course than a case of uncomplicated croupous pneumonia. The first forty eight hours comprise the stage of congestion and engorgement, and at the close of this period hepatization is usually complete: marked dullness on percussion may be found over the diseased part of the lung. In this form of the disease the lesion is usually confined to one lobe, or part of one lobe. The fourth and fifth days include the term of hepatization.

In favorable cases, resolution frequently occurs on the fifth day and on the sixth the inflammatory deposit is almost completely removed by absorption. In complicated and unfavorable cases, resolution may be delayed until the seventh or eighth day. In fatal cases, gray hepatization takes place on the eighth day and death occurs within

the following twenty-four hours. Catarrhal pneumonia may continue for twelve or fourteen days, resulting in either recovery or death.

No physician has ever formulated a rational treatment for pneumonia, one that in practice meets the entire approval of any—excepting himself; therefore the treatment must necessarily be largely empirical.

The principal object for which the physician is called is to relieve pain caused by the invasion of the disease. In some cases a hypodermatic injection of morphine may be necessary, especially if the patient is extremely nervous and insists upon immediate relief; otherwise a dose of ipecac compound, once every three to six hours, will very materially relieve the pain and render the patient more comfortable. If respiration is short, quick, and performed in a gasping manner, a full dose of lobelia in connection with asclepias will quickly relieve by relaxing muscular rigidity. The arterial sedatives—aconite if the pulse is frequent and small, veratrum if full and bounding—may be given alternately with the lobelia and asclepias, about every hour, until hepatization is complete. When this stage is reached, the pain usually subsides; then bryonia alba is substituted for the lobelia and asclepias, and under this in connection with a supportive treatment uncomplicated cases almost invariably recover.

The important object to be accomplished is to regulate the action of the heart. If the pulse rate is not allowed to exceed 120 beats per minute, with a corresponding temperature of about 104°, the patient is comparatively safe and capable of withstanding the force of the disease; the continued excessive action of the heart not only exhausts its power of functional endurance but acts as a battering ram, forcing the blood into a comparatively impervious lung, causing more dense and complete engorgement and hepatization, a condition extremely unfavorable to absorption and a speedy recovery.

In mild as well as severe cases I invariably apply to the chest the compound powder of lobelia and capsicum, dusted on a cloth previously spread with either lard or vaselin; this is renewed twice daily and continued throughout the duration of the disease. The whole chest is also enveloped in a cotton-wool jacket that is not removed until absorption is complete.

In complicated cases the complication is usually the most serious feature and requires first attention. If a bilious condition exists—indicated by a semi-comatose state, tongue heavily coated, especially at the base, with a yellowy pasty substance, bowels constipated—an emeto-cathartic will give the best and quickest results. If œdema of the lungs, or hydrothorax, occurs, prompt relief will be derived from administration of tincture or infusion of *Apocynum cannabinum* as a diuretic cathartic. Typhoid symptoms will usually subside under the influence of antiseptics, my own preference being for baptisia and sulphite of soda.

In impending heart failure, cactus grandiflorus, digitalis, nitro-glycerin, convallaria, strophanthus and alcoholic stimulants are given as indicated—recently I had very gratifying results from the administration of the double chloride of gold and soda in combination with nitrate of strychnia.

But when we have exhausted our skill and also the materia medica in a vain search after effective remedies, and seem obliged to sit placidly by and acknowledge defeat, while death unmolested claims the patient as a victim, we have at least one resource that if properly and scientifically applied will surpass in favorable effect all other forms of treatment—one that can, moreover, be applied at all stages of the disease and repeated when the temperature threatens to rise above a safe point. This, on account of its simplicity, has not received from physicians the investigation it really merits, yet those who have by actual experience tested its virtues testify highly in its favor. I have repeatedly placed patients suffering from pneumonia and in a delirious and semi-comatose state, in a *wet pack*, and in two or three hours have aroused them from a refreshing sleep and had the extreme satisfaction of finding them in a perfectly rational condition. Since adopting this method I have not had to sign a death certificate resulting from this disease.

Providence, R. I.

THE NEURO-MOTORY DISTURBANCES OF THE LARYNX.

BY DOCTOR P. RAUGÉ.

(*Continued from page 391.*)

Despite the few contradictory views with respect to the mode of action of the cortical laryngeal centre, the significance and extent of its action, and the result of its morbid lesions, authorities have hitherto been unanimous in according it an undisputed control over the phonatory movements. I here recall for mere mention the endeavor of Rossbach, who, supported by a single observation, fancied he might attribute to the insula a part in the phonic innervation of the larynx.* But the question has recently been complicated by a series of experiments, the results of which were reported by M. Onodi at the Sixty-sixth Congress of German Naturalists and Physicians at Vienna.† He recognizes, with many others, the existence of a cortical centre, confirms its localization, and verifies its bilateral action on the movements of adduction; but he observes that this centre is in no wise indispensable to the exercise of phonation. For proof he cites the fact that the voice persists after destruction of the centre in both hemispheres, hence there must exist elsewhere a more profound motory focus, the presistence of which assures the conservation of the voice in the preceding experiment; it remained only to determine its seat, and this M. Onodi is said to have discovered by performing through the brain the series of successive sections so dear to the Vienna school. He concludes that there exists, back of the transverse sulcus which separates the anterior from the posterior quadrigeminal tubercles, a zone of eight millimeters containing this focus: while this region remains united to the bulb the animals under experiment retain the faculty of crying, but they become completely mute as soon as it is separated therefrom.

Regarding the intra-cerebral course of the cortico-bulbar fibres, it may be admitted *a priori* that the cortical laryngeal centre sends forth, like all the cortical centres, a system of white fascicles which descend through the corona radiata, the internal capsule, the peduncle, and the protuberance, terminating below in the midst of the gray nuclei of the bulb. Although physiology and the clinic have thus far yielded us very little information respecting the passage of these unifying fibres, I believe it is not impossible, by resorting to certain analogies and utilizing all identifying marks, to establish with some probability the position of this fascicle in the different regions of its course. We know whence it starts—foot of the ascending frontal; we know where it terminates—nucleus of the pneumogastric and probably of the spinal; and finally, we owe to an autopsy of Garel the knowledge of a third landmark indicating its course, viz., the position assumed by this laryngeal fascicle at the level of the internal capsule. From Garel's observation we know that the laryngo-motory fascicle occupies the external part of the angle—that is, the point where the white substance of the capsule is in immediate contact with the summit of the lenticular nucleus. Now, recalling the course followed in the hemisphere by the fascicle which Professor Lépine and MM. Raymond and Artaud have called the *geniculated* fascicle, one is struck with the fact that at the three identifying points at which we have heretofore been able to determine the position of the laryngo-motory fascicle it is merged with the geniculated fascicle; it begins and terminates with the latter, traversing the angle or knee and the internal capsule at the same point; may we not then assume that the two courses are united at other points and that the fibres of the larynx are a fascicle superadded to those of the masticatory nerve, of the hypoglossis, and of the inferior facial, hitherto regarded as forming by their union the sole elements of the geniculated fascicle? With these data, may we not assume that the entire course of the laryngeal fascicle is as follows: Beginning in the cortical layer, at the level of the foot of the ascending frontal, perhaps of the third frontal and of the furrow which separates, it traverses in the oval centre, the inferior frontal fascicle of Pitres' third section; lower down we see it in the internal capsule, in contact with the lenticular nucleus; then

---

* "Localis. des Cortic. Stimmcentrums beim Menschen," *Deutsches Archiv für Klin. Med.*, vol. xlvi, Maerz, 1890.

† October 25th, 1894; see *Berl. Klin. Woch.*, November 26th, 1894, pp. 1089-1093.

in the peduncle, at the level of the middle third, between the fascicle of aphasia and the pyramidal fascicle; it finally again appears in the protuberance, back of and within the pyramidal fascicle, until the moment when it crosses with the opposite fascicle before plunging into the bulbar nuclei.

Representation in the bulb of laryngeal innervation is at present the subject of much discussion, and it is rather difficult to set forth the question clearly amid the disputes by which it is befogged. In the innervation of the larynx, what is the rôle of this portion of the cerebro-spinal axis, and which among its gray nuclei are those whence this innervation proceeds? What path does it follow in going from the surface of the bulb to the trunk of the pneumogastric? Does it pass through the roots of this nerve, or through the roots of the spinal, or both ways at once? Does each of these two orders of roots bring separately to the common trunk the two distinct influences, one of which directs the respiratory act and the other the phonatory act? Such are the delicate questions which formerly received the most precise response and the clearest solution, viz.: That there are two columns of gray substance, representing the nucleus of the spinal nerve and that of the pneumogastric; from each of these two nuclei a fascicle of nerve roots bringing to the common trunk one of the two forms of motory activity—the spinal exclusively commissioned to transmit the vocal influence, the pneumogastric the respiratory activity; these two modes of innervation confounded in the common trunk above the point of anastomosis of the spinal. Such was the seductive theory which summarized as recently as ten years ago the dogma of laryngeal innervation.

To this simple formula has been opposed for some time, not another formula, but a series of contradictory opinions which agree only in repudiating the ancient doctrine, and the most modern and fashionable of which consists in refusing to the spinal nerve any intervention in the laryngeal movements.

Before discussing the value of this subversive anatomy, and indicating the regrettable modifications which the experimental conclusions of Claude Bernard have suffered at the hands of the German physiologists, permit me to recall briefly the orthodox anatomy of the bulb and its traditional physiology, so far as the origins of laryngeal innervation are concerned.

We know the transformation which the gray axis of the marrow undergoes to form at the level of the bulb the nuclei of the cranial pairs. At the height of the *bec du calamus* (point or horn of the calamus) the canal of the ependyma opens at its posterior part and extends into the large channel which is no other than the fourth ventricle. This opening in the central canal is caused by an inversion of the base of the forceps major which, up to that point, limited this canal at the rear and which is now placed (not back of, but) within the base of the forceps minor. At this level there is thus formed, from each side of the median raphe or suture, two gray vertical columns, juxtaposed and parallel, immediately subjacent to the floor of the fourth ventricle. The most internal (posterior motory) column represents the base of the forceps minor, the head of which has been separated by the intercrossing of the pyramids; it constitutes, as we know, below, the nucleus of the hypoglossis (internal white wing), higher up the nuclei of the motory nerves of the eye. The external column (posterior sensory) responds similarly to the base of the decapitated forceps major. From the side, by the antero-posterior passage of the sensory fibres of Burdach's fascicle into the lateral sensory fascicle, are formed (gray wing) the sensory nuclei of the glosso-pharyngeal and of the pneumogastric, and, higher up, that of the auditory nerve. Hence it is this part of the gray substance of the bulb which contains the sensory nuclei of the laryngeal mucous membrane. Anterior to this sensory tract, but far more deeply plunged into the thickness of the bulb, is a motory column (anterior motory column, antero-lateral nucleus of Stilling) formed by the head of the forceps minor, separated, as we have seen, from its base. This column is to us of capital importance, since it contains, from the bottom to the top, the motory nuclei of the spinal, the pneumogastric, and the glosso-pharyngeal nerves—that is, all the bulbar centres which preside over the motility of the larynx.

We see that the laryngeal nerves possess

in the bulb two nuclei of origin juxtaposed from the front to the back and separated by a tolerable thickness of white substance: the base of the forceps major, origin of the sensory fibres; the head of the forceps minor, origin of the motory fibres.

It remains for us to examine how the motory roots emerge from the nuclei which we have just described, and how they are associated to form the nerve trunks. The upper part of Stilling's nucleus sends forth seven or eight fillets which pass out of the lateral furrow below the glosso-pharyngeal nerve and soon unite into a common trunk—the trunk of the pneumogastric. Further down, yet always in the lateral sinus, emerge five or six roots which are presently fused like the preceding ones to form a common fascicle, the trunk of the bulbar spinal. But this trunk, scarcely formed, soon loses its independence and plunges into the pneumogastric (internal branch of the spinal) at the level of the supero-external part of the plexiform ganglion. From this moment the trunk of the pneumogastric represents a very complex fascicle in which are inextricably confounded, in the midst of foreign elements, all the nerve fibres destined for the larynx—those fibres which the pneumogastric owes to its own roots as well as those which it has received from the anastomosis of the spinal. Despite this intimate fusion, the fibres of the spinal nerve and those of the vagus yet preserve a physiological independence in harmony with their diversity of origin. We know with what clearness Claude Bernard showed the difference of their rôles in innervation of the larynx, the fibres of the spinal bringing phonatory motility, those of the pneumogastric respiratory motility. I cannot pause to describe the memorable experiments by which this physiological dissociation was established: suffice it to recall the fact that by removing the spinal nerve Bernard rendered animals aphonic, whilst section of the pneumogastric suppressed the respiratory movements.

But this luminous conception of the double bulbar origin of the two modes of laryngeal activity has been shaken by modern experiments. For the classical doctrine have been substituted a whole series of unforeseen and diverging affirmations. Thus the pneumogastric, after having been first deprived of all influence on the movements of the larynx, is now considered as their sole and all-powerful director; the experiments of Grabower, confirmed by those of Grossmann, have indeed stripped for its profit the internal branch of the spinal, removal or section of the latter being in their estimation without any influence on any of the forms of motility of the vocal cords. At the last Congress of German Naturalists and Physicians (Vienna, September, 1894) M. Onodi reiterates his experimental arguments against the spinal nerve and again denies its influence over laryngeal innervation. Removal of this nerve at the neck or in the head, duly confirmed on autopsy—its section—its electric excitation —in a word, all the forms used in nervous experimentation, are claimed by this author to have yielded the same negative conclusion.

Despite the contradictions and surprises to which we are accustomed in experimental researches, there prevails between the results of modern physiologists and those of forty years ago too singular an opposition to permit our explaining it simply by the progress of technique or difference in experimenters. If the same removal of the spinal nerve which uniformly rendered mute the cats of Claude Bernard, leaves undisturbed the vocal powers of M. Onodi's dogs, there is something wrong either in the method of the experiment or the manner of construing it. For my own part I can find but one plausible explanation, and that is that the spinal nerve which is to-day removed is no longer the spinal nerve of Claude Bernard. I hasten to explain a supposition which may seem rather bold. We know that the spinal nerve proceeds from the nerve axis by two very different orders of roots—a long lower series of fillets proceeding from the marrow which go to form the external branch, and four or five bulbar roots which are fused in the trunk of the internal branch, the latter, as soon as formed, plunging into the pneumogastric. From this disposition it follows that the bulbar roots of the spinal nerve are sometimes very difficult to separate from those of the pneumogastric, to which one is tempted to unite them; and this confusion is so natural that it prevailed in the classical descriptions until Scarpa's day.

We know indeed that Willis designated under the name "spinal" only the roots beginning in the marrow, and attached to the pneumogastric the fillets proceeding from the bulb—those of which we have since made the internal or anastomotic branch of the spinal. Now I cannot help believing, in view of their experimental results, that the gainsayers of Claude Bernard have, without suspecting it, returned to Willis's conception of the spinal nerve. If they can remove this nerve with impunity and without damage to the laryngeal function, it is perhaps because they remove only the medullary spinal, which, in fact, exerts no action on the larynx, and innervates only the sterno-mastoid and the trapezius. If, on the other hand, they accord to the pneumogastric this surprising omnipotence over laryngeal innervation, is it not because they have annexed to it the bulbar roots of the spinal—those which form the internal branch and constitute, if I may so term it, the *veritable* laryngeal spinal? I am well aware that M. Grabower in a recent memoir* protests indignantly against such a humiliating confusion. But, for my own part, his arguments, far from persuading me, lend support to my suspicion. M. Grabower shows by a series of microscopic sections that the gray nucleus of the spinal nerve ascends far less high in the bulb than has hitherto been admitted; that it is arrested at the level of the median part of the intercrossing of the pyramids, and continues above, not in the nucleus of the pneumogastric nerve, which remains absolutely distinct from it, but in the nucleus of the hypoglossis. This origin of the spinal nerve, not less than the disposition of its roots, brings M. Grabower to the conclusion that the accessory "is a nerve exclusively medullary." Can this phrase, twice repeated in the memoir, be aught else than an avowal of the confusion which I have just mentioned? If the spinal nerve of M. Grabower does not penetrate into the bulb, this signifies clearly that he removes from Scarpa's spinal nerve its nuclei and its bulbar roots; and if he removes from the spinal to give to the pneumogastric the only portion of the former which acts on the larynx, it is not surprising that the first is deprived, to the profit of the second, of all power over the motility of the organ. We should thus no longer have, as between the ancients and the moderns, an experimental discord which nothing can explain, but rather a simple misunderstanding in the partition and nomenclature of the series of nerve roots superposed in the lateral furrow of the bulb. It would then be simply necessary to reach an understanding as to the number and position of the radicular fascicles which should be credited to the spinal nerve or attributed to the pneumogastric.

I now reach the region of the neuro-laryngeal apparatus in which all the original fillets, merged in a common trunk, pursue through the density of the neck and in the thoracic cavity that strange and complicated course which conducts them as far as the summit of the thorax, only to bring them back to the larynx by a long recurrent passage which seems to be a useless detour. It might be supposed that in quitting the ill-known regions of the nerve centres we have finished with hypotheses and theoretical contentions; but we shall here also encounter one of the greatest difficulties that has confronted neuro-pathology for ten years. I refer to the interpretation of that form of motory disturbance which writers continue to designate under the name of paralysis of the abductors, although they are farther than ever from agreeing with respect to the mechanism which this designation seems to affirm, and although it is perhaps more prudent to retain provisionally the title "permanent adduction," which expresses only a clinical aspect. I here limit myself to setting forth as rapidly as possible the delicate terms of the controversy, and to showing the positions which are now actually occupied on this field by the two adverse opinions:

From the point where the spinal nerve merges into the pneumogastric, up to the point where the recurrent commences to ramify, the fascicle of laryngeal nerves transports, closely united, all the motory fibres of the larynx, with the exception of the superior laryngeal (which detaches itself from the common trunk at its very origin at the level of the plexiform ganglion). Lost in the trunk of the vagus amid foreign fibres, resuming further on its independence when it becomes

* *Arch. de Fraenkel*, tome ii, fasc. 2, 1894.

the recurrent, this fascicle, in its double journey, certainly represents the most exposed and the most frequently attacked of all the nerve cords of the organism. This undesirable privilege it owes first to its long course, but especially to the adjacence of a series of organs whose disorders it frequently shares either through direct propagation or by simple compression.

Let us imagine—this is the simplest way—that one of these neighboring lesions, or a primitive alteration, or a traumatism of the nerve, has destroyed totally or annulled functionally the *ensemble* of the motory fascicle: the result may be readily foreseen and offers small ground for discussion; complete paralysis supervenes; the vocal cord is immobile, in cadaveric position, incapable of any displacement, whether of vocal adduction or of respiratory abduction.

But it is not customary for the nerve trunk to undergo at the outset this complete annihilation. Before being thus suppressed, it must inevitably traverse a phase of partial paralysis or preliminary irritation which in a goodly number of cases forms the limit of the disease. It would seem *a priori* that among these incomplete forms we might expect to encounter a great variety of aspects, in proportion to the multiplicity of the nerve fibres contained in the common trunk, and that all the forms imaginable of partial paralysis and dissociated contraction might be realized in this manner, in accordance with the unforeseen character of the compressions or the chances of morbid propagation. Now, instead of this variety which Theory predicts, Experience has shown that all the lesions of the common trunk which are not total lesions present, with a singular monotony, a symptomatic aspect always the same: permanent adduction of the cords, and respiratory troubles resulting mechanically from defective dilatation of the glottis, with integrity of the vocal function. Such is the singular law, the paternity of which is shared by MM. Rosenbach and Semon. When the clinic had established the generality of this formula, investigators did not fail to seek a theoretical interpretation; and here commence the divergences of doctrine which ten years of discussion have not succeeded in overcoming. The more ancient opinion, that which M. Semon continues to defend with indefatigable energy, attributes to the defective action of the dilators this permanent state of adduction, the constancy of which is affirmed by the laryngoscope. But in that case, how explain why in this dissociated form of paralysis it is always the abductors which are separately attacked or are the first to be affected? And by what singular privilege do the other muscles of the larynx escape destructive alterations which, it would seem logically, must strike blindly and with equal frequency each muscle of the organ? This species of discrimination in the seat of the lesion, or this lesser resistance attributed to one muscular group or to one fascicle of the nerve trunk, evidently represents the weak point in the doctrine. To escape the difficulty, investigators sought in permanent adduction a more probable mechanism, the facility of its production being related to the repetition of the symptom. It was thus that we were led to doubt the frequency of this systematic paralysis of the dilators. In its place was substituted the simpler notion of total contraction, the original genesis of which was more readily comprehended, since to produce it it was sufficient that an irritative lesion attack indiscriminately, without choice and without preference, all the fibres of the nerve trunk (Krause). The two varieties of deformation produced most commonly in the aspect of the glottis by the lesions of the nerve trunk were thus reduced to a mechanism uniform and, in a manner, symmetrical—the total destruction of this trunk producing the cadaveric glottis, and its total irritation producing permanent adduction. There thus existed henceforth only the alterations *en masse*, striking in one sense or another the *ensemble* of the motory fascicle; and we were obliged to cease admitting in these cases those dissociated lesions whose frequency Ziemssen formerly affirmed, and which the law of Rosenbach–Semon had already singularly restricted by limiting their possibility solely to paralysis of the abductors.

Such are the terms of the controversy now proceeding between the defenders of paralysis and the partisans of contraction. I confine myself to a statement of the problem, simply laying down its terms and preparing for its discussion.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

SIMILIA SIMILIBUS.

Editor MEDICAL AGE:

Although this system of absurdity is rapidly dying out, it still seems necessary to notice it occasionally, for the purpose of discovering why it is usually condemned by scientific physicians. When a physician objects to this system he is accused of bigotry, and people will sometimes say that regular physicians are blinded by prejudice and cannot be induced to study the truly scientific theories of the "new school." The gentlemen of the "new school" always speak of regular physicians as belonging to the "old school," frequently using this method as a means of recommending themselves, always endeavoring to convey the idea that regular physicians never read or study anything, and that they use nothing but mercury, antimony, emetics, and large fly-blisters, and nearly always have recourse to venesection; that, in fact, they employ nothing but the most crude remedies and practice medicine very much the same as they did about two hundred years ago. One seldom meets one of these little-pill men who can talk intelligently on scientific subjects, for they never get the training or education required to become physicians. This system of "attenuation" seems like a side-door or back-door for the various nondescripts to get into the ranks of the medical profession without study or training. Let a man buy a case of little pills and other "potencies," with a book of instructions, and he at once becomes a physician.

This peculiar specimen of the "genus homo" will practice on the principle of the old woman: "If I do you no good I'll do you no harm." It would certainly be a recommendation to a physician to know that he never did any harm, but although a man may not do harm by active measures he may do an immense amount of harm by passive treatment, and this system of negation is not always to be desired. There should be no amateur physicians, and yet we find clergymen and other people outside of the profession who are always ready to dabble in the practice of medicine. This is entirely wrong, for it not only interferes with the regular profession, but it looks like unpardonable conceit with a strong desire for cheap notoriety. I know of a clergyman, without training or experience in medicine, who prescribed for a patient—a slight hæmorrhage being the only symptom. This amateur "potentizer" looked very wise, with the statement that there was a rupture of the pleura three inches long—a diagnosis which would be next to impossible even with the most scientific and experienced physician. This is certainly misrepresentation, which not only creates a bad impression but causes us to look upon such amateurs with more or less suspicion.

With respect to domestic medicine, nothing but the most simple medicines should be used, and only in cases of emergency, for temporary relief, while waiting for the arrival of the physician. We look upon all these interlopers just the same as they would look upon us if we attempted to perform the duties of a clergyman in connection with the various church ceremonies. A story is related where one of these "medicine men" was called to attend a case of colic in a young boy. The usual two teacups half-full of water were left, with directions, and the parents were told that the boy would get relief in about a day and a half. Now it is well known that a sharp attack of colic engages a person's attention pretty thoroughly for the time being; and after the boy had been shouting and yelling like a Comanche for about an hour, a physician of the common-sense school was sent for, who relieved the boy in a short time with some ordinary anodyne. The doctor made the statement that the boy would certainly have been relieved in a day and a half, for he would then take his departure for the sweet bye-and-bye or "saccharine subsequently." This is one of the peculiarities of the "infinitesimal" practitioners: they never like to relieve a patient too soon, as they say, for they wish to allow the symptoms to become fully developed in order to understand the true nature of the disease. Now if you saw a monkey with a lighted torch going toward an open powder-mill, or a bull going into a china shop, you should not interfere, but wait patiently until matters have fully developed. Of course, in all cases of intense pain, the first indication is to give an anodyne and relieve the patient as quickly as possible.

Speaking of "pathies," let us not confine ourselves to any "pathy." A plague on all your "pathies!" But if we were inclined to adopt a "pathy," probably the term "curopath" would be the best of all—that is, use anything to cure your patient as speedily as possible, no matter from whence it comes.

The question has been asked: What is scientific medicine? In reply we might say, in practicing scientific medicine we base our diagnosis on a thorough knowledge of pathology and the various sciences which it involves. The therapeutics is according to the

result of long experience, founded on facts and proven by numerous tables of statistics. According to the founder of the "mild power" system, the totality of symptoms alone constitutes the disease, which he says is not caused by any material substance; the greater number of diseases, it is claimed, are of spiritual origin—their cause is not perceptible to the senses.

These people at this time made the assertion that the itch was at the root of all chronic diseases—"psora,"—and after twelve years of investigation decided upon the antipsoric remedies for chronic inflammations. This peculiar unpleasantness, caused by the "*sarcoptes hominis*," is sometimes called the "Scotch fiddle." Sulphur externally and internally is the remedy which will give relief in a few hours.

What they call "provings"—symptoms caused by drugs in healthy persons—constitute a large part of their literature; the remedy for a disease is that which will produce the symptoms in health, hence their "*Similia similibus curantur*." Pathology is ignored entirely, for they are concerned mainly with medicine. A large encyclopedia, devoted exclusively to "provings," is published by a Professor Timothy Allen, of New York.

"Potentizing" is the theory that medicines become more powerful as they become more attenuated or diluted. A certain Frenchman is said to have treated diseases with the most happy results by causing the patient to hold a bottle of medicine in the closed hand.

Another of their methods is called "olfaction;" that is, the patient merely smells the medicine.

To go still farther, a Frenchman by the name of Jahr published a work containing remedies for the various moral affections: thus for *la melancholie noire*, arsenic; *la melancholie douce*, hellebore; *la melancholie religeuse*, gold; for silence, ignatia; for a desire to drown, a globule of pulsatilla; for ill humor, aconite; for contemptuousness, ipecac; for desire to criticise—*disposition a faire des reproches, a critiquer*—belladonna and veratrum; for *amour malheureux*, hyoscyamus, ignatia, phosphorus; and agaric for a disposition to make verses. He gives a case of a disconsolate lover who in ten days was "potentized" into a state of felicitous indifference.

Of late years many of these men have partly adopted pathology and scientific medicine, but they still profess to adhere to their "potencies" and "attenuations;" that is, their treatment is still immaterial or spiritual. This is done probably to pander to the superstition of certain people who are unaccountably inclined to favor the "mild power" cure, and also from a lack of knowledge of anything better. It has always seemed strange that these men do not drink wine and feed themselves according to their theory of "potentizing" and attenuation. Now, underlying all this system, as we have seen, was the idea that the causes of disease were impalpable or immaterial, that is, spiritual, and this great foundation was merely imaginary and entirely unreasonable.

Modern medicine is doing some of its best work in showing the material and visible character of the cause of many of the commonest diseases, and suggests this in many cases where it has not yet been demonstrated. How many living germs may be seen under the microscope, and how easily we can take a portion of any of these poisons on the point of a lancet and insert it under the skin to produce its peculiar disease! The germ can be preserved or destroyed, and thus disease may be propagated or prevented.

With respect to spiritualism: alcohol, which destroys the liver and kidneys when used to excess, is not taken in immaterial doses, but in large quantities, diligently repeated, even by men of the "potentizing" school. Very true, these individuals have done some good by departing from the common lines of medicine and disturbing and discrediting indefensible modes of practice; but they entirely missed the right conclusion in this system of negation, and although they despised Nature they unintentionally showed what Nature could do. The father of "infinitesimalism" never kept a record of cases, which was one of his weak points, and he considered Nature a bad doctor. Fleischmann, of Vienna, who was a "potentizer," treated twenty-one cases of acute pneumonia, with one death, but this result was entirely eclipsed by Doctor Hughes Bennett, who during a period of sixteen years treated a hundred and five cases of acute pneumonia with only one death.

By leaving cases to Nature we were emancipated from the old traditional methods of treatment. We all have our "placebo" and something to amuse the patient when no medicine is required, and all well educated physicians fully understand the importance of controlling the patient and inspiring him with confidence.

Finally, since all these fine theories of the immaterial, dynamic and spiritual origin of disease have been exploded by the revelations of modern pathology, their demolition only completes that of the therapeutical theories which rested upon this absurd imaginary foundation.

G. A. Williams.

Bay City, Michigan.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., JULY 25th, 1895.

Editorial.

PROFESSOR THOMAS HENRY HUXLEY.

This well known scientist died at Eastbourne, England, June 29th. He was by long odds the most distinguished member of the medical profession of this or any other century, and his loss to the scientific world cannot be computed by words.

We abstract from *The Lancet* (London) the following as in a measure supplementary to a more complete history to be found in our Progress columns:

With the death of Professor Huxley there passes away a man of robust mind and great intellectual power and intrepidity, an original and independent thinker, and a master of vigorous, masculine English, as well as a man of very wide range of thought, varied attainments, and rare learning. He was one of the most conspicuous figures of the latter half of this century in science, literature, philosophy, metaphysics, and education. Any contribution bearing his name was always read with avidity, because he wrote both vigorously and tersely, was singularly happy in his use of illustrations, with the additional charm of touches here and there of wit and humor and an occasional dash of poetry and pathos that afforded glimpses of the broad sympathies and pitifulness of his deeper nature. Apart from the scientific work he had accomplished, and the reputation he had won from the special jury of science, these qualities, and the generous, enlightened, and fearless character of his writings, made him a leader of popular thought and a reformer of popular misconceptions. As a strong swimmer, confident in his own powers, plunges into the stream and finds a pleasurable exercise in breasting the tide, so did Huxley love to sound the depths and encounter the difficulties of a controversial or abstruse subject. Some writers, like the late John Stuart Mill, have dwelt upon the mergence of individual character in a dead level of uniformity as the bane of modern civilization: the manly independence and intellectual force and honesty of men like Huxley provide the best antidote. That he was regarded by some as too assertive and aggressively dogmatic in the expression of his views is of little importance now. Who cares to regard these things in recollecting the nobility of the man, his honesty and hatred of cant, his pride that preserved him from all mean and sordid motives, his manly sympathies with the sufferings of humanity, and his courage in following without wavering, or shadow of turning, what he conscientiously thought to be the light of truth and reason? Nature had endowed him with great gifts, and he bestowed them on his fellow-man with an open palm. On his sacrifices and laborious exertions in the cause of science, and on the bold and striking generalizations and the achievements he accomplished in that field, there is no need to dwell here, for these have been universally recognized by his friends and foes alike. As an educational lecturer he was admirable; his scientific knowledge and tone were as conspicuous as was his easy and lucid exposition, and, as we have said, his use of illustrations was always specially happy in that they really did illustrate what he was elucidating or describing. His writings are models in their way, so transparently clear that the reader can see to the bottom of the deepest subject, because their author had himself penetrated those depths and previously examined and ascertained the meaning underlying the phenomena he was describing Not only had Huxley genius, but he had cultivated Nature's rich soil with rare assiduity; he was an excellent classic, a modern linguist, a draughtsman, and a highly cultured man. And it may be confidently asserted that he exercised his powers with a dominating love of truth for its own sake, and an abiding sense of responsibility. As he has himself told us, he held the conviction that there was no alleviation for the sufferings of mankind except veracity of thought and action. It was this conviction that made him try to promote the increase of natural knowledge and encourage the application of scientific methods of investigation to all the problems of life. Huxley belonged to his generation and mankind. The news about a change of government and a pending election, and the list of titular honors and distinctions conferred by the outgoing government, which appeared in the papers contemporaneously with an obituary notice of the Right Honorable T. H. Huxley, will be obliterated from the memory like a last year's almanac, but his name will always remain on the scroll of fame of the Victorian age.

MEDICAL COURTESY.

One of our eclectic contemporaries, under the caption "False Pretension of Allopaths," takes exception to recent utterances by the President of the Minnesota State Medical

Society and the *Philadelphia Polyclinic*, because of employment of the adjective "irregular." It is taken for granted apparently that the term is intended to apply exclusively to so-called "eclectics" and "homœopaths," chiefly the former—an assumption which, it is perhaps needless to remark, is in great degree gratuitous.

Candidly, at this period of the world's history and the advanced status of education, we see no occasion for invidious doctrinal and class distinctions among upright and conscientious practitioners of medicine. There are many in both eclectic and homœopathic ranks just as capable, intelligent and advanced as the best; there are homœopathic schools that, in the character of instruction given and the general facilities afforded for thorough medical education, are unsurpassed by any medical institution on the continent of America; likewise eclectic institutions equally as effective. In spite of the captious jealousies and the dissensions constantly being sowed by "small souls," medical science is too broad and of too great moment to be hampered by petty quarrels over matters that are, at best, of no special import, arising as they do from personal belief and individual conscience. We believe the profession at large is willing to accord the title of "regular" to any individual who seeks to deserve the same and has received a thorough medical education; perfect professional affiliation has already been granted in a vast number of instances. But!—Just so long as the upholders of two branches of medicine insist upon their own sectarianism by means of the words "eclectic" and "homœopath," and, so to speak, "trade" upon these titles; and just so long as they insist upon applying to other medical men the term "allopath"—a word coined by the "homœopaths" and adopted by the "eclectics" as a term of reproach and revilement—just so long they will foster dogmatism, intolerance, a non-scientific spirit, and clog the wheels of medical progress. *Per contra*, the medical profession at large applies no titles to these two branches which they have not themselves adopted or to a certain extent justified by their own enunciation as a class distinction.

However suitable "eclectic" and "homœopath" may have been in the early evolution of these branches of medicine, the fact now remains that both are equally as great misfits as the term "allopath;" that neither "homœopaths" nor "eclectics" deal with medicine as an entity, or admit the scientific axiom that "the whole is greater than any of its parts."

It cannot be denied that the "regulars" are likewise to blame in that the more narrow-minded ignore that charity which should be given to all, and foster differences in the vilest spirit of trade-unionism. At the same time, if "homœopaths" and "eclectics" will insist upon a trademark medicine, and the misuse of the term "allopath," just so long these exclusives court from the rest of the medical profession the same scant courtesy which they themselves afford; but should they choose to drop the trademark and enroll themselves simply as practitioners and exponents of medicine, the limit of recognition and affiliation must be measured by honor, honesty, and truth. The Episcopalian does not deny affiliation because of individual belief in matters of faith, neither does the Presbyterian pass his time abusing the creed of the Congregationalist, but in all denominations matters of creed are swept aside and forgotten under the broad designation of Christianity. So, too, the creed of "homœopaths," "eclectics" or "regulars" may and should be sunk in the interests of medicine as a whole, and of making it a scientific calling purely. It certainly is not incumbent upon any medical man to enter upon a warfare of abuse, crimination and insult against those who chance to differ from him in matters of belief and conscience; it is demanded by the very nature of his calling that he minister to the best of his individual ability to the needs of the ill and afflicted, and at the same time sink all personalities for the benefit of humanity at large.

Finally, we have not the slightest sympathy with any individual, regardless of professional affiliations, who insists upon, so to speak, carrying a "chip on his shoulder," nor with him who constantly prates and howls for courtesy and recognition which he is not himself equally willing to extend to others. We are, however, glad to believe that these faults are more in the seeming than in reality, for the instances are by no means isolated wherein "eclectics" and "homœopaths" have sought

a recognition by "regulars" which has been heartily accorded. As one of the "regular" profession, the editor of this journal fails to discern any valid reason why a *gentleman* —in the fullest acceptance of the term— should not affiliate socially and professionally with any other gentleman, or why a sound medical education should not be recognized regardless of the source whence it has been obtained. The whole question resolves itself merely into the dropping of the misfit and trade-union titles, thereby sinking dogmas and isms and burying puerile disputes and quarrels that are beneath the consideration of any devotee of science. Captious fault-finding, backbiting and reviling tend neither to conversion or to the healing of any breach that arises; especially it does not in the least tend to uplift the dignity of the profession. It is a simple matter of justice, universal in application, that all who carry on their profession to the fullest extent in the interest of truth, honor and charity are entitled to recognition as brethren. When this greatly-to-be-desired medical millennium shall have been reached, the terms "regular" and "irregular" will have no weight save as a distinction between the scientific practitioner and the charlatan, the honest man and the knave.

NUCLEIN IN THERAPEUTICS.

Of all the organic remedies which have been put forth, none seems to have so well sustained the expectations of its originator as Vaughan's Nuclein. Strange to say, very little negative evidence thus far has been adduced regarding this medicament; on the contrary, nothing but praise of its action emanates from all sources—in septic diseases, notably diphtheria, scarlatina, etc., and likewise in phthisis, cancer, etc., and certain forms of paralysis arising from lack of nerve-nutrition.

Doctor McClintock, of Ann Arbor, asserts that in addition to the valuable germicidal power of Nuclein it has been thoroughly demonstrated that it *is a valuable antitoxic.*

Doctor John Aulde, editor of the *American Therapist*,* concludes a paper upon Nuclein as follows:

The principles to which I wish to especially direct attention are those first put forward by Professor Vaughan in a paper read before the Pan-American Medical Congress. It was he who first demonstrated the true scientific basis of Professor Metschnikoff's phagocytosis, by showing that it was the function of the white blood-corpuscles to secrete or manufacture an antiseptic substance, a substance which gives to the blood its "*natural antiseptic*" properties and prevents decomposition of that fluid. He began by first extracting from yeast-cells a substance which he proved to possess antiseptic properties of a high order. Then he took the yelk of an egg, and from the nucleus of that extracted a similar substance which likewise possessed powerful antiseptic properties. Then, acting upon the suggestion furnished by the work of two Frenchmen in attempting to extract an antiseptic substance from the white blood-corpuscles found in pus, he proceeded to extract an antiseptic from these bodies while in a state of health, believing that when found as an accompaniment of pus their valuable properties must be lost or seriously impaired. He then reasoned that if the white corpuscles, while in a state of health, were able to give a product which would arrest the multiplication of micro-organisms, it was not unlikely that glands which are supposed to be intimately connected with the development of these cells might also possess these properties in a perceptible degree. As a further step in his demonstrations, he determined to inoculate animals with tuberculous sputum solutions and use these antiseptic substances for the purpose of preventing the development of tuberculosis. And at every step he was rewarded with success. These substances he has designated Nucleins, for want of a better name, and they are described as phosphorized proteids. They are probably the "defensive proteids" which have so long been assumed to exist in the human economy.

It would be superfluous to say more regarding the remedy which has already been before the public for some months and, as has already been remarked, gives such satisfaction as to be an earnest of its value in therapeutics for the future. Doctor Aulde especially speaks of its value in malaria, anæmia, rheumatoid arthritis, uterine hyperplasia, neurasthenia, etc.

* May, 1894, page 318.

THE INDEX MEDICUS.

In another column will be found an editorial from the *New York Medical Journal* anent the untimely demise of the *Index Medicus.*

To those who are especially interested in the continuation of this publication, we recommend the plan outlined. The great trouble, however, with all such is that each

and every individual is apt to wait for his neighbor or some one else to make the first move. If there are enough medical men in the United States sufficiently public-spirited to contribute materially toward the revival of the *Index Medicus*, there is little doubt that the publisher can be persuaded to again undertake the task. THE MEDICAL AGE would therefore suggest that all who are inclined to contribute, immediately send their checks to the *Index Medicus*, George S. Davis (P. O. Box 470), Detroit, with the precise understanding that if the *Index* is not revived within a reasonable time their remittances will be returned.

This is a matter that admits of no delay; and if the journal is to be perpetuated, measures looking thereto must be speedily taken.

It is, of course, hard to judge of the editorial work on such a publication as the *Index Medicus*, nevertheless in this connection there is no harm in making the suggestion that in case this periodical is revived, some changes be made therein. There is every reason to believe the value of such a publication can be greatly enhanced by more careful and thorough indexing of medical subjects, and by cross-indexing. It is desirable that, besides the title of a paper, all the contained subject-matter be indexed. There are few papers to-day that do not more or less approach subjects outside of the given title, and in such cross indexing would be of great value—especially is this true where comparisons are made, deductions drawn, or special remedies indicated. Indeed, it would seem desirable that whenever a remedy is mentioned it should be indexed in the department of Materia Medica and Therapeutics.

We sincerely trust the *Index Medicus* will be revived. As *Nature* (London) remarks: "It will be hardly to the credit of medical societies, and scientific workers generally, if this indispensable monthly index is allowed to come to an end for want of something like $2,000 a year!"

ELATERIUM AND BRIGHT'S DISEASE.

In a former issue of THE MEDICAL AGE we had occasion to remark upon *morbus Brightii*, mentioning Elaterium as, perhaps, one of the best of purgatives. Incidentally we should have mentioned also that in the presence of Bright's disease, particularly when well advanced, Elaterium often loses its efficacy, and indeed at times appears practically inert. It is in the earlier stages of the malady that this drug is apt to prove of greatest benefit.

EDITORIAL NOTES.

The Index Medicus.—

"It is difficult to express adequately the regret that is felt in the medical profession at the *Index's* suspension. The trouble seems to be that this feeling, although acute, is confined to too small a number of individuals who feel themselves able to assist in re-establishing the publication. Now and then it comes to our knowledge that a public-spirited person is willing to contribute materially to make good the deficiency in the income from subscriptions to that incomparable publication; in particular, it was with great pleasure that we lately received from Doctor Charles E. Sajous, of Philadelphia, now sojourning in Paris, the following letter:

> The early discontinuance of the *Index Medicus* is announced—a misfortune that every true American should deplore, a calamity to the professional world. If the physicians of the United States but knew what that noble publication has done and is doing for their country abroad, they would hardly permit it to die for the want of the few dollars it needs to continue its existence. Two hundred volunteers at twenty-five dollars a year each would still save it; they are surely to be found among the thousands of professional men who during a war would gladly offer their services to their country. The demise of the *Index Medicus* would brand the American flag with a stain. Who is going to permit it? Please find enclosed my check for twenty-five dollars.

"Doctor Sajous's check, drawn to the order of the editor of this journal, has been endorsed to Mr. Davis, who was the publisher of the *Index Medicus*, and transmitted to him. We hope that many will be found willing to follow Doctor Sajous's example, and that thus the publication may be resumed. It seems well to suggest that those who are disposed to aid in the proposed movement should communicate directly with Mr. Davis. In saying this we are taking it for granted that that gentleman is willing to take charge of

such contributions, and willing, too, to take part in any promising effort to revive the *Index Medicus*.

"Since the foregoing was written we have received a letter from Mr. Davis in which he says:

As the matter now stands, the *Index Medicus* is in the hands of the editors. If a guarantee fund could be established which would secure the publisher against loss, I should be willing to undertake its publication again, without profit or remuneration, and would agree that any surplus which might be realized should be divided among the subscribers to the fund. If Doctor Sajous's suggestion were followed—namely, that two hundred physicians subscribe $25 each to this fund, or as subscriptions to the *Index Medicus*—its future continuance would be guaranteed, and with the additional subscriptions of $10 which would probably be gained, there would, no doubt, accrue a profit, which would be returned to the two hundred special subscribers *pro rata*, and perhaps reduce their subscription materially.

"Certainly Mr. Davis's course in this matter has been in every way commendable, and we hope that he may before long be again the publisher of the *Index Medicus*."—*New York Medical Journal.*

Anhalonium Lewinii.—

A communication from the Department of Agriculture to the editor of THE MEDICAL AGE states this drug has "remarkable toxic properties," the effects produced upon the system resembling somewhat those induced by the resinous body of Indian hemp.

The Secretary of the Department declares that physiological experiments carried on under the direction of the Department Chemist revealed the fact that this drug produces intoxication of an exhilarating kind, the patient seeing beautiful visions and experiencing exalted emotions. No deleterious after-effects were noted, nor were there any derangements of functional activity of the body except those manifested upon the brain.

Two alkaloids have been extracted from the plant, together with a considerable quantity of resinous material, the exact nature of which has not yet been determined. The *Washington Post* and *New York Sun* have published a sensational account of this drug under the title, "Gay Mental Fireworks Seen by the Men who Took Muscale as an Experiment."

Items and News.

A Chemical Affinity.—

I love thee, Mary, and thou lovest me;
Our mutual flame is like the affinity
That doth exist between two single bodies:
I am Potassium to thy Oxygen.
'Tis little that the holy marriage vow
Shall shortly make us one. That unity
Is, after all, but metaphysical.
O would that I, my Mary, were an acid,
A living acid; thou an alkali,
Endowed with human sense, that, brought together,
We both might coalesce into one salt,
One homogeneous crystal! O that thou
Wert Carbon, and myself were Hydrogen;
We would unite to form Olefiant Gas,
Or common coal, or naphtha. Would to heaven
That I were Sulphur and thou wert Lime,
We would produce a lovely sulphuret
When thus combined. I'd be Sulphuric Acid,
If also thou wert Soda; in that case
We should be Glauber's Salt. Wert thou Magnesia
We'd form the salt that's after Epsom named.
Couldst thou Potassa be, I Aqua Fortis,
Our happy union should that compound form—
Nitrate of Potash, *alias* Saltpetre.
And thus our several natures sweetly blent,
We'd live and love together until death
Should decompose our earthly tenement,
Leaving our souls for all eternity
Amalgamated. Darling, thy name is Green
And mine Delany. Why should not we
Combine to form Delaniate of Green?
We will. The happy day draws nigh
When with Miss Green I to the church shall hie.

—*Pharmaceutical Journal of Australia.*

Modern Medical Works.—

There is an element that must be considered in connection with modern encyclopedic medical literature. Publishing firms do not find it profitable to pay for first-class authorships, and are constrained to admit articles from inexperienced but inordinately bumptious young men, who thus inflict upon an unsuspecting medical public a raft of scaffolded and stilted theoretical clap-trap in lieu of reliable practical information. That these articles have just a sufficiency of well worded and authentic truth or authentic observation to delude the reader and to give to the whole the semblance of being the result of studied and well weighed information, makes these articles more useless for any real practical purposes, as well as dangerous to the inexperienced, who are apt to place too much reliance upon the utterances therein contained. Often these encyclopedic works are burdened and padded out to great bulk and to the greatest possible number of volumes.—*National Popular Review.*

The Medical Millennium.—

Really scientific medical societies are needed; not gatherings where a clique of men

occasionally display their superior skill and ability to a crowd of admirers, and where the attempt of an outsider to develop a thought or present an idea is met with glacial atmosphere, but really scientific societies at which everything is lost sight of save the progress of medicine.

To such a society the sole conditions of membership would be the possession of a good character and a diploma from a reputable medical college, whatever the nature of its teaching. If we do not agree with a man's views, we cannot convert him by calling him a fool. Let us take him into our midst and argue the matter. If we are so positive we are right, it is incumbent upon us to endeavor to convince him, and he, in turn, will shed light upon our own paths, for the truth lurks in *aurea mediocritas.—Medical Brief.*

Newspaper Reports of Prolificness.—

According to a report much republished of late in the newspapers, a certain couple called Mr. and Mrs. George G. Danville, a farmer and wife said to be living near Yankton, South Dakota, had twenty-seven children, all born in triplets, the oldest being less than thirteen years old. Having had some experience of the falsity of such reports, we wrote to a reputable physician of Yankton, who investigated the story and reported that no such persons live or ever have lived in the county. Twenty-eight letters for "Mr. Danville" are lying unclaimed in the Yankton postoffice. One wonders what motives inspire the newspaper reporters in periodically starting such stories on their rounds. The custom shows how skeptical medical writers and statisticians must be in repeating these concoctions of the vivid reportorial brain.—*Medical News.*

The Empty Capsule.—

This invention constitutes a specific boon to therapeutics, inasmuch as it offers opportunity to bring remedies in powdered form into direct contact with the secretions of the stomach. In this regard it is superior to the solid capsule, whether of the hard or soft variety, since the junction of the two halves offers a *point d'appui* for the gastric juices whereby the capsule is readily softened at its edge, causing it to curl backward and speedily release the medicament.

A Century of Married Life.—

We speak of a silver wedding, gold wedding, and diamond wedding; but what shall we call the celebration of the completion of one hundred years of married life? Such a term is needed now, for Hungarian papers chronicle such an event as having occurred in the village of Zsombolga, where this immortal couple of the combined age of 233 years flourished. Long live Johann Szathmary and Madame !—*Western Druggist.*

Aged Practitioners.—

Doctor W. Farrier, of Biddeford, Maine, is in active practice at the age of ninety-eight, and visits his patients on a bicycle. He attributes his exceptional vigor to the use of wintergreen tea.

In the same State Doctor Baynes, of Rockland, is still practicing at the age of ninety-nine; his teeth are almost perfect and his sight excellent.

Pneumonia.—

Osler must have had an unfortunate experience in the treatment of pneumonia to have reached the conclusion that it is a self-limited disease, not influenced by medicine and not cut short by any means at our command. Such has not been the general experience of our profession.—*New York Medical Times.*

A Buried City.—

An unknown city like that of Pompeii is being excavated in Central America, at the foot of Volcano Aqua. Pottery, fine glassware, jewels, flint instruments, and skeletons over six feet long, have been taken out from depths of fourteen to eighteen feet.—*Medical Times.*

Cleanliness Next to Godliness.—

Doctor Joseph Price says he has done one hundred abdominal sections consecutively without a coated tongue and without a pulse above one hundred, except in cases that bled. This was done by clean surgery, without chemicals of any character.—*Medical Times.*

Death and the Bicycle.—

Sudden deaths of aged bicyclists from heart disease are beginning to be reported. Aged people, and those who are affected with heart disease, should not indulge in this exercise.—*Gaillard's Medical Journal.*

Accident to a Physician.—

Doctor Ed. R. Palmer, of Louisville, suffered a fall from his bicycle on July 5th, which caused his death on the day succeeding. It seems his head struck the curb, and the base of the skull was fractured.

Professor Huxley.—

For the portrait of Professor Huxley that adorns this issue as a frontispiece, we are indebted to the courtesy of Messrs. Munn & Co., publishers of the *Scientific American.*

Book Reviews.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Co., Toronto.

The July issue contains: "Rome Revisited," by C. R. W. Biggar; "The Revival of Napoleon Worship," by J. W. Russell; "Halifax Heroes," the story of a pestilence, by W. B. Wallace; "An Indian Lover," by Josette Gertrude Menard; "After Long Years," by Reginald Gourlay; "Two Days in Weimar," by Ellen Sigrid; "By the Judgment of God," a tale of Ontario, by R. F. Dixon; "The Bernhardt and the Bear," by A. M. R. Gordon; "South Australia's Victory for Adult Suffrage," by Catherine H. Spence; "Hypnotism," by G. M. Aylsworth; "Selfishness and Socialism," by Robert L. Simpson; "St. Andrew's Church, Niagara," by S. A. C. The poetry of the number is by J. F. Herbin, J. Henderson, D. McCaig, Edward Meek, Jeremy Clay, and James A. Tucker. There are the usual "Gable Ends."

THE NEW SCIENCE REVIEW. Price, 50 cents; $3.00 per year. The Transatlantic Publishing Company, New York.

The contents of the July number are: "History of a Recent Astronomical Discovery," by Major-General A. W. Drayson; "Classification of Scientific Knowledge," by J. Taylor Kay; "Climate and High Altitudes," by Henry Russell Wray; "The Curvature of Space," by John Dolman, Jr.; "Is Life Universal?" by J. Edward Chappel; "The Brain in the Light of Science," by S. Millington Miller, M.D.; "Evolution and Teleology," by F. H. Perry Coste, B.Sc.; "Mental Telegraphy," by Claude Stuart Coles; "The Dogmatism of Science," by Mrs. Bloomfield Moore; "Has Mental Healing any Scientific Basis?" by Henry Wood; "The Missing Link." by Wilson Hart; "The Periodic Law," by Jonathan W. Wainwright.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Company, New York.

Among the dozen illustrated articles and stories in the August number are: "The Princess Zora," by Doctor S. M. Miller; "Virginia Beauties;" "Cupid's Ways in Many Climes;" "A Cruise on a House-boat;" "An Account of the Art Gallery to be Presented to Montpelier, Vermont, Next Month;" "The True and Laughable Story of the Cardiff Giant Hoax," by Albert L. Parkes, the manager of this gigantic fraud. "Dan Beard," "Arthur Foote," and "For Fair Virginia" are the subjects of the articles in the artist, musician, and dramatic series, respectively. The fiction, poetry and fashions complete a very attractive number.

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards & Docker Co., Philadelphia.

The July issue contains: "The Symbiosis of Stock and Graft," by Erwin F. Smith; "On a Supposed Case of Parallelism in the Genus Palæosyops," by Charles Earle; "Birds of New Guinea," by G. S. Mead; "On a New Classification of the Lepidoptera," by A. S. Packard. There are also the usual departments devoted to Literature, Mineralogy, Petrography, Geology and Paleontology, Botany, Vegetable Physiology, Zoölogy, Entomology, Embryology, Psychology, Anthropology, Scientific News, Recent Books and Pamphlets, General Notes.

THE PETERSON MAGAZINE. Price, 10 cents; $1.00 a year. Penfield Brothers, New York.

In the July number appears the second installment of "George Washington," by T. J. Mackey; "On the Cornish Coast," by J. Eddie; "Daughters of the American Revolution," by Margherita A. Hamm; "Yankee Doodle," by W. M. Butterfield; "The Actor and His Make-up," by Harry P. Mawson; "The National Academy Exhibition," by Rupert Hughes; "For the Old Love's Sake," by Isabel Smithson; "An Ideal Summer Resort," by George M. Simonson; and "Aunt Belinda's Hallowin'," by J. F. Cowan.

OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Co., San Francisco.

In the July issue will be found: "Our Spanish-American Families," by Helen E. Bandini; "The Cour d'Alene Riots of 1892," by George Edgar French; "The Battle of Flowers at Santa Barbara," by Rounsevelle Wildman; "Extracts from Mrs. Lofty's Diary," by Batterman Lindsay. The poetry is by D. T. Callahan, M.D., and Carrie B. Morgan. There is the usual "As Talked in the Sanctum."

BIRDS OF EASTERN NORTH AMERICA. By Frank M. Chapman. Cloth; 12mo; pp. 421. Price, $3.00. D. Appleton & Co., New York.

This is a very complete ornithological work, and so free from technicalities as to be intelligible without reference to a glossary. Of a size so convenient that it may be carried afield in the pocket, it is an especially desirable adjunct for the working naturalist; at the same time it is a volume that will attract even the youngest members of the household.

Though from its title it would seem that its bird histories are restricted to Eastern North America, the fact remains that there are very few species in the length and breadth of the Continent that are not represented. In addition there is a complete key, with description of plumages, nests, eggs, distribution, and migration. The introductory chapter is a very complete epitome of ornithological science, and withal so concise that it can be mastered within a very brief period of time; hence it is possible for the youngest to learn without difficulty how to identify birds and collect skins, nests, and eggs.

Notably the illustrations are unequaled by any work of like scope, and many give evidence of having been taken photographically from life, being reproduced in half-tone; indeed, so excellent is the work in this respect that the coloring of the plates would have been a work of supererogation. Another notable feature is the chart of colors, which is of very material aid when it comes to identifying species and genera.

We cannot speak too highly of this volume, which deserves a place in every household; its universal circulation will tend more than any other one means to the preservation of those attractive creatures of woodland and field which are the delight of all true lovers of nature.

Beside the Bonnie Briar Bush. By Ian Maclaren. Cloth; 16mo; pp. 322. Price, $1.25. Dodd, Mead & Co., New York.

No book of modern times has created such a furor; no book has so universally touched the tender chords of the hearts of the people; despite its many Scotticisms, it appeals to each and every one. Manifestly each character depicted is a portrait—in no other way could such a work have been written. There has never been anything to compare with the sketch of William Maclure, the country doctor who gave a life of skill and sacrifice to a rural Scottish community; and perhaps nowhere else, but in Scotland, could such a life be found. The work as a whole is a true interpretation of the real inner spirit of life in Scotland. Although a collection of tales, there is a connection between them all; the same characters appear and reappear; and for humor, pathos, and rare intermingling of Scotch wit and comedy, the like has never been seen. At one moment the reader, in spite of himself, is moved to tears; at the next he has a glimpse of profound logic and of tenacious Calvinistic theology; a little later is delighted with that peculiar dry pawkie wit which constitutes Scottish humor. The author is a great master in pathos; and no one, not even Sir Walter, justly dubbed "The Wizard of the North," is superior to Ian Maclaren in this respect. Of the attractiveness of the volume it need only be said it is one of the works which, when perused to finis, will, in a majority of instances, cause the reader to return to the initial chapter and peruse it again—a test that is borne by but few volumes. We would like if every man, woman and child could read this production, since it will be impossible to enjoy its pages without drawing therefrom decided moral and mental benefit.

Ord's Zoology. By Samuel N. Rhodes. Cloth; 8vo; pp 90. Published by the Editor, at Haddonfield, N. J.

This is an exact reproduction of the part originally compiled by Mr. Ord for Johnson & Warner, and published by them in Guthrie's Geography in 1815. It is, moreover, taken from Mr. Ord's private annotated copy, to which is added an appendix on the more important scientific and historical questions involved.

The history of the second American edition of Guthrie's Geography is involved in strange obscurity. Of the Johnson & Warner edition of 1820 but one copy appears to be in existence. Moreover, there is but one copy of the third edition in four of the most important libraries in the United States, and a half-copy of the first edition. The Carey quarto edition, however, is not so rare.

Apart from its technical value, this work possesses great historical and literary interest. George Ord was a contemporary and associate of Alexander Wilson, and his Zoölogy of North America is, for its extent, by far the most accurate which has ever appeared. All naturalists owe Mr. Rhoads an immeasurable debt for placing within their reach a copy of this extremely rare work, one that is of untold practical value.

The Royal Natural History. Edited by Richard Lydekker, B A., F.R.S., F.Z.S. Paper; royal 8vo: pp. 96. Price, 50 cents. Frederick Warne & Co., New York.

Number 2, Vol. I, contains two magnificent chromo portraits, one of a leopardess and her young, the other of the macaques monkeys, either of which, in a frame, would be worthy of a place upon the library wall. There is continued an account of the guenons—viz., the vervet, grivet, green Mozambique, patas, nisnas, mona, Diana, bearded, black-bellied, moustache, hocheur, lesser white-nosed and ludio monkeys. Then follow the mangabeys, and eight species of macques, exclusive of extinct

forms. An exceedingly fine description appears of the black ape of Celebes, and the gelada baboon of the East Indies. Of true baboons seven forms, exclusive of extinct species and inclusive of the drills, are noted.

Chapter Five deals entirely with American monkeys, viz., the sapajous or capuchins, the woolly monkeys, spider monkeys, dourou, colis, and squirrel, titi, saki and uakari, and howling monkeys. Chapter Six, which begins in this number, is devoted entirely to marmosets.

As remarked in a previous review, the illustrations are of a most superior character and tend to aid greatly in the study of the species.

Nervous Diseases of Children. By B. Sachs, M.D. Cloth; 8vo; pp. 688. Price, $5.00. William Wood & Co., New York.

This volume covers a field of paramount importance in medicine. Nervous disorders and diseases are the natural accompaniment of so-called modern civilization, and have been observed for many years to be constantly increasing, particularly in communities where social luxuries abound. The limitation of this treatise to the nervous diseases of children is of special advantage, and there are included all those maladies which occur frequently during early life and that at this period manifest distinctive features. Such a work has long been a desideratum, for while the nervous affections of adults have received thorough attention the relations of the same to the young have obtained little of that regard which they undoubtedly deserve; and Doctor Sachs has performed the task in a most thorough, practical, and withal concise, manner. A notable feature is the number and excellence of the illustrations, one hundred and seventy in all.

Pathology and Treatment of Diseases of the Skin. By Doctor Moriz Kaposi. Cloth; 8vo; pp. 684. Price, $5.50. William Wood & Co., New York.

This work, which has already reached its fourth edition in German, and third edition in French, is a recognized text-book throughout Europe, and therefore it is not too much to expect that it will meet with a high degree of favor in America. Many points, such as the pathology of skin diseases, biology of parasites, and inflammation in its various stages, which are usually omitted, are here treated in a most thorough and comprehensive manner. As a descriptive writer Doctor Kaposi excels, and many of the rarest forms of skin disease are depicted with most astounding fidelity to nature. To all English-speaking physicians, especially those who read only their own language, this translation of a most able and practical work cannot but be of great value.

Napoleon III. and Lady Stuart. By Pierre De Laur. Cloth; 12mo; pp. 260. Price, $1.00. J. Selwin Tait & Sons, New York.

This purports to be a true narrative of the most notorious of the many *liaisons* of Napoleon III., the heroine being concealed under a *nom de plume*. It gives an insight into the true character of the Empress Eugenie such as has rarely ever found its way into print.—The coldness, the ambition and the plottings of this Spanish woman are features rarely touched upon by authors. It is stated with positiveness that a son, the result of the *liaison* with "Lady Stuart," and who was kidnapped by the Empress lest he might rob the Prince Imperial of some of the honors desired for the latter, is still living, and an officer in the British army. The work bears upon its face the mark of truth, and tallies well with the characteristics of Napoleon III. as we know them.

Remote Consequences of Injuries of the Nerves. By John K. Mitchell, M.D. Cloth; 12mo; pp. 273. Price, $1.75. Lea Brothers & Co., Philadelphia.

Injuries of the nerves are of frequent occurrence in private practice, and often the cause of intractable and painful conditions, consequently this volume is of especial interest. Doctor Mitchell has had access to hospital records for the last thirty years, as well as to government documents, and has skillfully utilized his opportunities This work will doubtless take a prominent place in medical literature among the special monographs which throw light into obscure places and contribute to the advance of medical science.

Physical, Intellectual and Moral Advantages of Chastity. By Doctor M. L. Holbrook. Cloth; 16mo; pp. 120. Price, $1.00. M. L. Holbrook & Co., New York.

The title of this book probably carries the idea of its author, who unfortunately, however, is none too familiar with his subject. The repetition of well known platitudes, without reference to conditions, is valueless; neither is a padding with voluminous quotations in any sense evidence. A lack of physiological as well as negative argument tends to invalidate the volume; the "high ideal" of the author can never be reached save through thorough scientific weighing of the subject in all its phases.

Therapeutic Brevities.

Santonin.—This is an efficient agent for the expulsion of the long round worm. One grain given twice daily will be sufficient to remove the lumbrici in three or four days; in infants, one-half grain is sufficient. Often the only knowledge we have of the destruction of the worms is the removal of the symptoms, as the parasite is killed and digested. In diarrhœa portions of the worms or "slime" may appear in quantity.

For pinworms it should be given in injection, as well as small doses by the mouth.

The wide range of action of Santonin in soothing irritability of the intestinal canal, and of the nervous system arising from intestinal irritability, is not generally known; nor is it known that its effect upon the nervous system is more important than its virtues as an anthelmintic. Many cases are met in children where the premonitory symptoms of cerebral irritation are strongly marked; or there are reflex symptoms of a troublesome character, or evidences of gastric, intestinal or spinal irritation that are not due to worms. These are more promptly overcome by Santonin than by any other drug, if employed in small doses—one-tenth grain. In conjunction with belladonna in the acute nephritis of scarlatina or diphtheria it acts like magic; so too in chronic catarrh of bladder, nocturnal enuresis, dysuria, and strangury. It is never necessary to give more than one grain at a dose in these cases, but it should be thoroughly pulverized *always.*—*Medical Times.*

Chloroform in Labor.—Doctor Bedford Brown declares there has never been reported more than forty cases of death from Chloroform in labor. He has used this agent every half-hour for from twenty to forty hours without trouble following; has seen profound chloroform narcosis lasting for three or four hours without grave effects—the alteration in the vaso-motor system of a pregnant woman enables her to resist the toxic action of Chloroform to this wonderful extent. He believes that the use of Chloroform in obstetrics is not only justifiable, but that it would be inhuman to withhold it. It is applicable to any stage in small quantities.

To remove rigidity of the cervix or perineum, considerable more Chloroform is required than merely to dull pain; it is only in excess that it tends to prevent contractions. It certainly *does not* tend to promote hæmorrhage. In 2,000 cases Bedford Brown administered Chloroform in at least three-fourths of the number, and no ill-effects ever followed.—*Medical News.*

Picrotoxin as an Antisudorific.—Semmola and Gioffredi mention a case, in a lady aged forty-three, of influenza, which was followed during convalescence by profuse perspiration after the least exertion, gradually increasing until it "poured off in rivulets." There was notably sympathetic nervous derangement; there was slight systolic murmur at apex, and some accentuation of the second sound of the heart in the pulmonary area. Atropine, agaricine, camphor, gallic acid and other antisudorifics were of no avail. Semmola concluded the trouble arose from vaso-motor paralysis due to the action of some influenzal toxin upon the vaso-motor centre in the bulb; the presence of dull red patches on the skin confirmed the diagnosis.

Since Picrotoxin has a stimulating action on the vaso motor centre, it was prescribed to be taken twice daily, in doses of half a milligramme, and with most satisfactory result. In eight days the hyperidrosis had entirely disappeared.—*Riforma Medica.*

Horse Chestnut.—Eclectics particularly recommend this remedy for its influence upon the circulatory apparatus, more especially the venous system. It renders best service when there is capillary blood-stasis, especially of the viscera and lower intestinal canal—thus it becomes a good remedy for many congestive troubles. It has also proved to be specific in its influence on certain forms of hæmorrhoids, whether internal or external, notably where there is burning, continued aching with a sense of fullness, and constant desire for evacuation.—*Eclectic.*

Staphysagria.—This is one of the most satisfactory remedies known, in the treatment of maladies peculiar to the prostate gland, the vesiculæ seminales, and the testes. It is especially valuable in spermatorrhœa, prostatorrhœa, chronic gonorrhœa, and gleet.

Owing to its peculiarly favorable influence upon the nervous system, it is likewise an excellent remedy for sexual derangement in females, particularly when there is depression of spirits, despondency, hypochondriasis, hysteria, moroseness, etc.—*Medical Times.*

Bladder Wrack.—*Fucus vesiculosus* certainly has a potent influence upon certain forms of abnormal adiposity, slowly but safely remov-

ing much of the excessive fat. It is a harmless remedy, invigorates the system, and stimulates all organs to a normal performance of function. In the very "lean" it is said to often increase the fat, paradoxical as this may appear. It is best taken when the stomach is empty in the morning, and care as to diet and general conditions aids its action.—*Chicago Medical Times.*

A Rare Anomaly.—M. Pean, the well known French surgeon, lately performed a successful operation on a young girl who suffered from incontinence of urine, caused by the presence in her vagina of a supernumerary bladder and urethra. Cases of this description are extremely rare, and where they do occur it is rarer still to find them amenable to art. In this instance the cure is said to be complete.—*Provincial Medical Journal.*

To Remove Tattoo Marks.—Make a mass, the consistency of dough, with salicylic acid and glycerin; apply to the tattoo marks, and confine with a compress and strips of adhesive plaster for one week. Then remove the layer of epidermis over the marks, and apply salicylic acid and glycerin as before.

It may be necessary to repeat three times, but usually the second application removes the marks.—*Medical Brief.*

Cinnamon in Influenza.—I have tried Cinnamon in some fifty cases of this disease, and have found it far more useful than quinine. I give simply drachm doses of the tincture three times a day. At least thirty of my cases were benefited, and I generally found from the patients' statements that the pains in the head and back were relieved after three or four doses.—Doctor H. A. Stonham, in *Lancet.*

Catarrhal Affections.—An excellent cleansing and disinfecting solution for free use in nasal cavities by means of spray, douche or syringe is:

Boric acid, 1 drachm.
Powdered borax, 1 drachm.
Common salt, 4 drachms.
Euthymol, 2 ounces.
Water, sufficient to make up 8 ounces.

—*Exchange.*

Chronic Urethral Discharge.—Doctor Lindsay prescribes ten grains of boric acid three times a day, along with an injection containing zinc sulphate, mercuric chloride, and boric acid, two or three times daily.—*Philadelphia Polyclinic.*

Epithelioma.—When small, Doctor Cantrell applies caustic potash in stick form in preference to any other operative treatment. If the parts are decidedly raised he uses the dermal curette before cauterizing. Finally some antiseptic dressing is applied, preferably carbolized olive oil, which must be kept in continuous contact until the parts are healed.—*Polyclinic.*

Polygonum Punctatum.—This is a stimulant emmenagogue. It is indicated where there is great torpor and congestion of the uterine system. In amenorrhœa arising from cold it is especially indicated; but when suppression is due to general debility, with or without anæmia, it is contra-indicated. It is preferably given in hot infusion.—*Medical Exchange.*

Oil of Cinnamon in Urinary Fœtor.—Oil of Cinnamon has a wide sphere of usefulness; and I had recently a case of very foul-smelling urine accompanied with a slight degree of cystitis, which was relieved by this means. It may be combined with hypophosphite of soda in almond mixture if desired.—Doctor MacMunn, in *The Lancet.*

Berberis in Syphilis.—As a general tonic, as a more or less effective periodic, and as a superior alterative, I find nothing equal to *Berberis aquifolium;* its power of renovation and innervation will give perfect satisfaction. I have also found it of special value in psoriasis, etc.—Doctor T. N. Reynolds, in *Homœopathic News.*

Corns.—Saturate a piece of cotton with one part chloroform in eleven of alcohol, and apply to the corn for one minute; then loosen the edge with finger-nail or knife, when it can be gradually removed without pain. Apply the mixture one or more times as may be required for removal.—*Medical Brief.*

For Pruritus Ani et Vulvæ.—

Salicylate of soda, 2 drachms.
Glycerin, 7 drachms.
Euthymol, 7 drachms.

Apply locally.

—*Pharmaceutical Journal.*

Rhus Toxicodendron Poison.—Green bean leaves bruised will afford instant relief and arrest progress; a decoction of the dried leaves is equally satisfactory.—*Scientific American.*

Medical Progress.

RIGHT HONORABLE T. H. HUXLEY, F.R.S., D.C.L., LL.D., F.R.C.S., ETC.—In Professor Huxley, science mourns her most distinguished champion, and the medical profession has lost one of its most illustrious members. His health had been failing for some time, and some seven or eight years ago the late Sir Andrew Clark warned him that his heart was in a condition which made his hold on life a frail one. Treatment at Maloja, however, by the system of graduated exercise introduced by Oertel, strengthened the failing organ so much that Huxley seemed to have entered on a new lease of life. Four or five years ago he pitched his tent at Eastbourne, almost under the shadow of Beachy Head, being attracted to the place not only by the bracing air, but by the opportunities for gentle hill-climbing offered by the Downs. So well did this suit him that until a very few months ago his upright carriage and the springiness of his step made it difficult to believe that his years were already three score and ten.

At the beginning of March he was attacked by influenza, with serious lung complications which, in the weakened condition of the heart, more than once brought him to the very verge of death. He rallied so far, however, that during the warm weather in the early part of May he could be carried downstairs, and he appeared for a time to make satisfactory progress. About ten days ago, however, a relapse occurred; embolic nephritis with further cardiac complications came on, and he passed away quietly on the afternoon of Saturday last, retaining consciousness almost to the last. The immediate cause of death was pulmonary embolism. He was confined to his room only a few days, having been in his garden for a short time so recently as the Tuesday before he died. He was attended throughout his illness by Mr. H. D. Farnell, F.R.C.S., of Eastbourne, who had the advantage of consultations on several occasions with Doctor Burney Yeo and once with Sir William Roberts, and the assistance of the Professor's son, Doctor Henry Huxley.

As a patient, Professor Huxley was all that the ordinary doctor, when himself ill, too often is not. From first to last he was perfectly calm, bearing his sufferings without complaint, taking a keen scientific interest in his own case, but leaving the management of it unreservedly in the hands of those who had charge of him. His playful humor remained unsubdued till the end. He jokingly warned one of his doctors not to argue with him on the physiological aspects of his case unless he wished to be "floored," and he offered to demonstrate the femur on his own emaciated limb. The very Sunday before his death he spent some hours in his garden delighting those about him with reminiscences and anecdotes told with nearly all his old wit and felicity of phrase. In one of the crises of his illness, when his perfect equanimity extorted some remark from his attendants, he said that when he was at sea he had sometimes been awakened by the rolling of the ship in rough weather; on hearing the voice of the officers on deck, however, he would quietly turn over and go to sleep again, with the thought that it was their affair, not his. In the same spirit, when difficulties arose in the conduct of his case, he told his physicians to do whatever they thought right, saying: "That is your business, not mine." In explanation of his docility as a patient he would say that all through his life he had been guided by two principles alone, namely: never to tell a lie, great or small; and always to obey lawful orders. In a word, Huxley died as he had lived, as a philosopher—steadfastly carrying out to the end, according to his lights, Goethe's precept "*Im Ganzen, Guten, Wahren resolut zu leben.*"

Thomas Henry Huxley was born, as he himself has told us, "about eight o'clock in the morning on May 4th, 1825, at Ealing, which was at that time as quiet a little country village as could be found within half a dozen miles of Hyde Park Corner." His father was one of the masters "in a large semi-public school which at one time had a high reputation." Why he was christened Thomas Henry he did not know, but he referred to it as a curious chance that his parents should have fixed for his usual denomination upon the name of the particular apostle with whom he had always felt most sympathy. Like many other remarkable men, he owed much to the influence of his mother. In his autobiography he says: "Physically and mentally I am the son of my mother, so completely—even down to peculiar movements of the hands, which made their appearance in me as I reached the age she had when I noticed them—that I can hardly find any trace of my father in myself, except an inborn faculty for drawing, which unfortunately in my case has never been cultivated, a hot temper, and that amount of tenacity of purpose which unfriendly observers sometimes call obstinacy."

His regular school training was of the briefest, a circumstance which he himself accounted fortunate, inasmuch as the society he fell into at school was the worst he ever knew. The boys were simply left to struggle

for existence among themselves, bullying being the least of the ill-practices current among them. Huxley himself "read everything from metaphysics to heraldry," Guizot's History of Civilization and Sir William Hamilton's Philosophy of the Unconditioned in particular making a deep impression on him, though he owns that of the latter work at least he could not possibly have understood very much.

As he grew up his great desire was to be a mechanical engineer, but the fates were against this, and while very young he commenced the study of medicine under a medical brother-in-law. He owns that in later life he was occasionally horrified to think how little he ever knew or cared about medicine as the art of healing. The only part of his course which really and deeply interested him was physiology, "which is the mechanical engineering of the human body." The extraordinary attraction he felt towards the study of the intricacies of living structure nearly proved fatal to him at the outset. When between 13 and 14 years of age he was taken by some older student friends to the first post-mortem examination he ever attended. Throughout his life he was "most unfortunately sensitive to the disagreeables which attend anatomical pursuits," but on this occasion his curiosity overpowered all other feelings, and he spent two or three hours in gratifying it. He did not cut himself, and none of the ordinary symptoms of dissection poison supervened, but poisoned he was somehow, and he sank into a strange state of apathy. He was sent to a farmhouse in Warwickshire and soon recovered, but for years he suffered from occasional paroxysms of internal pain, and from that time, to use his own words, his constant friend, hypochondriacal dyspepsia, commenced his half-century of co-tenancy of his fleshly tabernacle.

As a medical student he worked extremely hard when it pleased him, and when it did not —"which was a frequent case"—he was, he confesses, extremely idle (unless making caricatures of his pastors and masters can be called a branch of industry) or else wasted his energies in wrong directions. He read everything he could lay his hands upon, including novels, and took up all sorts of pursuits, to drop them again as speedily. He says: "No doubt it was very largely my own fault, but the only instruction from which I ever obtained the proper effect of education was that which I received from Mr. Wharton Jones, who was the lecturer on physiology at the Charing Cross School of Medicine. The extent and precision of his knowledge impressed me greatly, and the severe exactness of his method of lecturing was quite to my taste. I do not know that I have ever felt so much respect for anybody as a teacher before or since. I worked hard to obtain his approbation, and he was extremely kind and helpful to the youngster who, I am afraid, took up more of his time than he had any right to do. It was he who suggested the publication of my first scientific paper—a very little one —in the *Medical Gazette* of 1845, and most kindly corrected the literary faults which abounded in it, short as it was; for at that time, and for many years afterwards, I detested the trouble of writing and would take no pains over it."

In 1845 he passed the first M.B. examination at the London University, in which he obtained honors in physiology, but failed to secure the medal, being, as he said in a speech at University College, "thoroughly well beaten" by Doctor Ransom, of Nottingham. In the early spring of 1846, having finished his obligatory medical studies, though still too young to qualify at the College of Surgeons, he was talking to his fellow student, Sir Joseph Fayrer, and wondering what he should do to meet the imperative necessity for earning his bread. On Fayrer's advice, he applied to Sir William Burnett, at that time Director-General of the Medical Department of the Royal Navy, for an appointment. Within a couple of months he was, after passing an examination, entered on the books of Nelson's old ship, the Victory, for duty at Haslar Hospital. At Haslar Huxley had among his messmates the late Sir Andrew Clark—whom he speaks of as "my kindest of doctors"—and two future directors-general of the Medical Service of the Navy, Sir Alexander Armstrong and Sir John Watt Reid.

When he had been there seven months he was appointed to the Rattlesnake, Captain Owen Stanley (a brother of Dean Stanley). On the Rattlesnake, which was commissioned for a survey of New Guinea, the Louisiade Archipelago, and the Barrier Reef of Australia, he spent the greater part of the years 1846–1850, learning valuable lessons as to the realities of life, and using to the full the opportunities for scientific work the cruise afforded. During his four years of absence from England he sent home many communications to the Linnean Society, "with the same result as that obtained by Noah when he sent the raven out of his ark." Tiring of this unprofitable amusement, he in 1849 sent a more elaborate paper to the Royal Society, which on his return to England in 1850 he found had been published. The next three years were occupied by a battle with the Admiralty, which, instead of contributing, as

t had partly pledged itself to do, to the expense of publishing his scientific work, at last ordered him to join a ship. Huxley thereupon threw up his commission, and looked about for a professorship of physiology or comparative anatomy. Among other unsuccessful attempts he mentions that Tyndall and he were candidates at the same time for the chairs of physics and natural history, respectively, in the University of Toronto; that seat of learning, however, would have none of them. At last, in 1854, on the translation of Edward Forbes to Edinburgh, Sir Henry de la Beche, the Director-General of the Geological Survey, offered him the post of paleontologist and professor of natural history in the Royal School of Mines vacated by Forbes. He refused the former point blank, and accepted the latter only provisionally, telling Sir Henry that he did not care for fossils, and that he should give up natural history as soon as he could get a physiological post. "But," he adds, "I held the office for thirty-one years, and a large part of my work has been paleontological." In the same year he was appointed Fullerian Professor of Physiology in the Royal Institution, and Examiner in Physiology and Comparative Anatomy in the University of London. In 1858 he was Croonian Lecturer to the Royal Society, taking for his subject "The Theory of the Vertebrate Skull." In 1863 he became Professor of Comparative Anatomy at the Royal College of Surgeons; this post he continued to hold till 1869. He was elected President of the Geological Society in 1869, and of the Ethnological Society in 1870. In the latter year he was President of the British Association. Two or three years later he was chosen Lord Rector of Aberdeen, in which capacity he delivered an address on "Universities, Actual and Ideal," on February 27th, 1874. In 1875–76 he acted as substitute in the chair of natural history at Edinburgh for Professor Wyville Thompson, who was on board the Challenger on its famous voyage of scientific exploration.

Huxley was elected a Fellow of the Royal Society in 1851. In 1873 he was appointed its Secretary, and in 1883 he became its President in succession to Mr. Spootiswoode. The latter post he resigned, together with all his other public appointments, in 1885 on account of failing health. Moreover, he had reached the age at which he used jokingly to say that scientific men should be "pole-axed."

It would be tedious to enumerate all the honors of which he was the recipient. He was a corresponding member of most of the leading scientific societies in Europe and America; the Royal College of Surgeons (of which he became a Member in 1862) elected him a Fellow in 1884; and honorary degrees were conferred upon him by the Universities of Oxford, Cambridge, Dublin, Edinburgh, Würzburg, and Breslau. The Royal Society awarded him its medal in 1852, and the Geological Society gave him the Wollaston Medal in 1876. He was a trustee of the British Museum, and a member of the Senate of the University of London. In 1892 he was sworn of the Privy Council, a mark of distinction which is still unique as far as scientific men are concerned.

Huxley's work was by no means confined to scientific research and teaching. In 1870 he was elected a member of the first London School Board, and he took a very active part in its proceedings till his resignation in 1872. In 1881 he was appointed Inspector of Salmon Fisheries, and continued to discharge the duties of that post till ill-health compelled him to retire in 1885. He served on a number of Royal Commissions—on Vivisection, Contagious Diseases, Scottish Universities, Fisheries, etc. His last public act was when, in introducing the deputation to Lord Rosebery on the subject of the proposed new university for London, on January 22d, he presented the case of the supporters of the Gresham scheme in a speech of great brilliancy and power.

Space will not allow us to give anything like a full bibliography of Huxley's writings. His first paper, which, as already said, appeared in the *Medical Gazette* in 1845, contained a description of "Huxley's layer" in the human hair. In 1849 the Royal Society published his paper on the Anatomy and Affinities of the Medusæ, which had been communicated to it on his behalf by the then Bishop of Norwich (the father of Captain Stanley) on June 21st, 1849. In 1859 appeared his great work on the Oceanic Hydrozoa, which he had vainly tried to get the Admiralty to help in publishing. "My Lords," however, did nothing for him beyond expressing a gracious hope (which made no encroachment on the Navy vote) that the work would be creditable to himself and to the nation.

At the meeting of the British Association at Oxford in 1860 he strenuously defended the doctrine of evolution against Bishop Samuel Wilberforce and other clerical assailants; a summary of this memorable debate is given in his Evidence as to Man's Place in Nature, published in 1863. In 1864 he published Lectures on Comparative Anatomy. In 1866 appeared his Lessons in Elementary Physiology, which has run through numerous editions, and still holds its place as the best

introduction to the subject in the English language. Among his other works may be mentioned Introduction to the Classification of Animals (1869); Lay Sermons and Addresses (1870); Anatomy of Vertebrate Animals (1871); Critiques and Addresses (1873); American Addresses (1877); Physiography (1877); Anatomy of Invertebrate Animals (1877); The Crayfish: an Introduction to Zoölogy (1879); Hume (1879); Introductory to Macmillan's series of scientific primers (1880); Science and Culture (1882); The Rede Lecture on the Origin of the Existing Forms of Animal Life: Construction or Evolution (1883); Controverted Questions (1893); Evolution and Ethics, delivered as the Romanes Lecture at Oxford in 1893; besides numerous essays which have not yet been collected into book form. His last work was a criticism of Mr. Balfour's Foundations of Belief, the first part of which appeared in the *Nineteenth Century* of March. Huxley was taken ill immediately after writing this paper, of which we believe he was unable to correct the proofs. He was never afterwards able to do any literary work.

In all Huxley's writings the literary quality is of the best, his style in its incisiveness, strength, directness, and lucidity, being without an equal in scientific literature. Medical writers might with great advantage to themselves and unspeakable comfort to their readers take Huxley as a model. His mastery of style did not, like Dogberry's reading and writing, come to him by nature; his secret was that no sentence was ever allowed to go out of his hands until it had been made as perfect as possible, and he has left it on record that he thought nothing of writing a page two or three times over if by so doing he could arrive at a clearer expression of his meaning.

Sir Joseph Fayrer says:

"It was with profound grief that I heard of the death of my old and much respected friend. The loss of the foremost biologist of this or any other country will be universally deplored, for he has for many years had a predominant influence on the progress of biological science and the expansion of scientific teaching which was not surpassed by even that of his friends, Darwin and Tyndall, and has contributed beyond all others to the advancement of natural knowledge and the promotion of the scientific methods of investigation of the problems of life. To this end, indeed, the whole strength of his surpassing intellect was steadfastly, through good and evil report, devoted, and the results have been recorded in language so incisive and convincing as to leave on all who have followed his teaching the impression of incontrovertible truth, and the conviction that in this department of knowledge he was *maestro di color che sanno*. I have always felt it to be a great privilege to have known him so well during early life. The friendship and affection in which I held him never diminished, though after his departure in 1846 I had no opportunity of seeing him again until my return from India in 1872, when I had the gratification of finding that on his part the feeling was unchanged, whilst on mine it was enhanced by the admiration with which I regarded his great natural powers and the unwearying labor in scientific research which had raised him to the preëminent position he has since occupied.

"We were fellow-students from 1844 until he joined the Navy in 1846, and it was during that time that I learnt to recognize his great intellectual power and the keen interest he took in the physiological lessons of Wharton Jones and other teachers. It was not surprising that he took honors at the London University, and it was with a feeling of confidence that I looked forward to a distinguished career for him when he departed with Captain Owen Stanley in the Rattlesnake on his scientific mission.

"That he entered the naval service I have always felt proud to think was due to my persuasion, for after consultation one day I urged him to apply to the Director-General of the Navy. He did so, and the result was an appointment to Haslar, and subsequently to the Rattlesnake. Doubtless had he selected any other career the result would have been the same, but as some of his earliest contributions to science arose out of the expedition to the South Seas, one cannot but regard that as having in some degree determined the course and direction of his future work.

"To inculcate veracity of thought and action, to subordinate to it reasonable or unreasonable ambition for scientific fame, to develop and organize true scientific education, and to combat whatever might oppose it, were his aspirations, and that by which he hoped to be remembered by posterity.

"But he will be remembered not only as a great original thinker, investigator, and promoter of biological science, but as a man of the highest principle and unswerving devotion to truth, a genial and charming friend, a keen but courteous controversialist, and one who illuminated all he said or did with the brightness of a remarkable personality, and a goodness of heart that endeared him to all who knew him and now lament his loss."

On Thursday, July 4th, the remains of Professor Huxley were interred in the cemetery at Finchley, where two of his children are buried.—*British Medical Journal.*

The Medical Age.

VOL. XIII. DETROIT, AUGUST 10th, 1895. No. 15.

Original Articles.

THE CYSTOSCOPE AND ITS LIMITATIONS AS A DIAGNOSTIC AID.*

BY FREDERICK W. ROBBINS, A.M., M.D.

In these times, when every effort is being expended in perfecting methods of diagnosis as well as the technique of operation, the genito-urinary organs have not been neglected, and in the diagnosis of diseases peculiar to them ocular demonstration has more than ever before become the handmaiden of palpation and chemical research.

In the female subject the inspection of the bladder has been made very easy by means of the simple endoscope of Doctor Howard Kelly. Through the endoscope the inspection of the mouths of the ureters and catheterization of the same, as well as the pelvis of the kidneys, as Kelly does it, does not seem difficult. As yet no such simple device has been produced for the inspection of the male bladder, but we find in the cystoscope a very satisfactory instrument for use in many doubtful cases of bladder or kidney disease.

The cystoscopes at present in use are the Nitze, made in Berlin, and the Leiter, made in Vienna; modifications of these instruments have been placed on the market, but all are probably inferior to the two mentioned; and these two are in principle if not in fact identical, for they were worked out by Professor Nitze in conjunction with the instrument-maker Leiter. The instrument which I use was made by Leiter, and differs from the Nitze mainly in the construction of the tip which contains the light surrounded by a metallic shield. The lamp is easily replaced when burned out. In the Nitze cystoscope the glass with contained lamp is at the extreme end of the instrument, and with no metallic shield is in all parts surrounded by the fluid of the bladder. Many cystoscopists, among them the authority on cystoscopy of this country, Doctor Willy Meyer, of New York, use the Nitze instrument chiefly on account of several secondary cystoscopes devised by Nitze which in some cases are of advantage.

The cystoscope, like the telescope, was a crude instrument at first, but has been improved from time to time until its present state of perfection was reached about five years ago. In the tip beneath the crystal window is the electric lamp, and near the junction of the tip with the shaft is placed a prism which sends the rays of light, diminishing the size of the inverted picture, down the shaft to the eye. There is within the tube passing to the prism an optical combination of lenses called the telescope attachment, which gives us a clear, erect, and slightly diminished picture of the object looked upon. In the Nitze instrument the object is slightly magnified. At the ocular end of the instrument the electric connections are made and so arranged that the light can readily be turned off or on and the position of the prism in the bladder be easily noted. The size of the shaft is No. 22 F.

At times it is an advantage to possess the irrigating cystoscope, which is this instrument with two tubes through which water can be forced into and drawn from the bladder. The inlet tube has its opening just back of the prism, so that its surface can be irrigated by the clear water as it is forced in.

There have been devised a number of instruments by which attempts were made to catheterize the ureters, but all have been failures. Doctor Meyer wrote me that there had been no improvements of note within the last three years, but recently an extensive article came to my notice in the *Berliner*

*Read before the Michigan State Medical Society.

Klinische Wochenschrift of April 29th, 1895, by Doctor Max Nitze, in which the Doctor gives to the profession an instrument very ingenious and which we hope will prove as practical in the hands of others as it seems to have been in the hands of its author.

In the female I can see no place for the electric cystoscope of any variety, since the simple inventions of Professors Pawlik and Kelly have been given to the profession.

In the use of the cystoscope it is essential to have the right sort of battery. The platinum must be brought to a white heat gradually, and not too much heat produced, else the lamp will be immediately burned out; and when the proper amount of light is produced there must be no increase or decrease in its illuminating power. I mention this because I found great annoyance from these causes in my first attempts at cystoscopy; but since supplying myself, at the suggestion of Doctor Meyer, with the battery made by the New York Galvano Electric Co., there has been no further trouble.

I do not propose taking time to report cases, but will emphasize some of the classes of cases in which cystoscopy is an advantage or necessity. First, however, we must keep in mind three conditions that must be present if cystoscopy is to be done with any satisfaction: The urethra must readily allow the entrance of a No. 22 F. instrument: The bladder must have a capacity of about five fluidounces—this is in accord with the results of the experiments of Nitze, which showed that this amount of fluid is necessary to distend the bladder sufficiently to overcome the folds of mucous membrane of the normally contracted bladder, and also, as Doctor Meyer suggests, one's judgment is apt to be much nearer perfect when observations are made under similar conditions, for in a bladder so contracted that the capacity is only an ounce or two there is not much to be gained from cystoscopy, and there is some danger of burning the mucous membrane: Finally, it must be possible to keep the fluid nearly clear for some little time; profuse hæmaturia, for example, always necessitates waiting until the hæmorrhage has for the time ceased, before continuing the exploration.

Often the cystoscope may be used with little or no pain, but it is frequently necessary to inject into the bladder and posterior urethra from one to three drachms of a six-per-cent. solution of cocaine.

Enlargements of the prostate are readily observed through the cystoscope, and it might make considerable difference in our judgment regarding operations whether we see a protruding middle lobe with small pedicle causing much distress, or diffuse lateral hypertrophies where the results of operation have not as yet proved so satisfactory.

To one unaccustomed to the use of the cystoscope it is easy to mistake a little fold of mucous membrane falling over the entrance to the urethra for a tumor, but further experience will remove all doubt in that respect. After entering well the bladder, it is desirable to make the examination systematically in order not to overlook anything, and this is done by carrying the beak directly to the fundus and drawing the instrument forward until the urethra shuts off the light from the prism. The superior segment of about 60° has been observed, and by repeating the procedure, turning the instrument to the right about 60°, then 120°, and finally 180°, and so to the left, the entire bladder will have been explored. If nothing attracts the eye other than a pinkish-gray surface, the mucous membrane may be considered normal and our attention may be turned to the ureters, which, as is well known, are seen at the right and left angles of the trigonum, the urethra marking the third angle.

When cystitis of a mild grade is present, one may observe the congested vessels not unlike the condition observed on a congested retina through the ophthalmoscope; but in the more severe forms of ulcerative or tubercular inflammation of the mucous membrane the cystoscopic picture will be that of a dirty gray surface with tags of pus hanging from it or floating in the water with which the bladder is filled.

If there has been an obstruction to the flow of urine for some time—as the result of a stricture, for example—concentric hypertrophy of the bladder will have taken place, and the thickened bundles of muscular fibre can be seen projecting through the mucous membrane, giving a basket-like appearance to the entire surface. Then, again, the similar condition termed the sacculated bladder may

exist, where one or more compartments are thrown into shadow, and into these pockets we can thrust the lamp in search of foreign bodies which are apt to exist and are easily overlooked in this condition.

A dark spot on the surface of the bladder may on careful observation be seen to be a ragged ulcer, possibly covered with phosphated deposit or a growth tuberculous or malignant. If an ulcer is believed to be present, the injection of a solution of iodide of potassium into the bladder will prove whether there be exfoliation of epithelium, because if that be the case in the course of fifteen or twenty minutes the characteristic reaction of iodine can be obtained from the saliva with the starch test. Foreign bodies, as pins, catheters, ligature knots, have been observed by means of the cystoscope.

It is often objected that the cystoscope is comparatively useless because in most cases where cystoscopy would be performed for bladder disease an exploratory incision would have the advantage of allowing a complete operation at once if necessary, and would be at least beneficial on account of the perfect drainage of the bladder.

It must be borne in mind that we use the cystoscope for diagnostic purposes, and not as an operative procedure. This instrument will be allowed when the patient will not submit to an exploratory operation, and as a result of the examination it is often made clear whether an operation shall be made above the pubis, through the perineum, or not at all.

I would not for a moment desire to be understood as wishing to substitute the cystoscope for other means of diagnosis, but, as Doctor Meyer says, after all has been elicited that can be concerning a case, the resort to the cystoscope is the final act in completing a diagnosis.

No one is so skilled that his judgment may not be often confirmed or changed by the addition of more light. I have known cases where small phosphatic stones have been thought before operation to be large calculi, and perineal section was made, when the cystoscope would have without doubt demonstrated the size of the stones and probably their character so that lithotrity and evacuation would have been found all-sufficient.

Much can often be added to our knowledge of a bladder trouble by cystoscopy; sometimes very little. In suppurative disease, usually the bladder can be douched out carefully and good vision obtained, but if there is present a growth bleeding profusely at the slightest touch, or if there is profuse hæmorrhage from the ureters, vision is soon obstructed and the examination is unsatisfactory—but even in such cases good results may be obtained upon the second examination after the patient has had complete rest and the bleeding has ceased.

The irrigating cystoscope I have not used, but the experience of others has proven its value.

In many subjects the study of the condition of the ureters is of prime importance. They pierce the serous and muscular coats, and obliquely pass for some distance beneath the mucous membrane before entering the bladder; there the ureteral sphincter prevents the urine from trickling into the bladder, but as often as the pressure in the pelvis of the kidney and ureter is sufficient the sphincter relaxes and the urine enters the bladder in little jets. Under different conditions, of course, these jets would be thrown out more or less often, at intervals of from twenty to sixty seconds usually, but both ureters should discharge their contents at intervals nearly alike—and when Doctor Meyer in one case found the jets from one ureter every thirty seconds and from its opposite every three minutes, he at once concluded that the secreting power of one kidney was much less than that of the other. It should also be noted whether the jet of urine is clear. In some cases of pyelitis, worm-like masses have been seen passing out from the ureters.

As in urethritis the meatus is red and swollen, so a similar condition may be seen at the mouth of a ureter leading to an inflamed kidney. Parting and prolapse of the ureter is not a very uncommon condition. The trigonum must be carefully examined for conditions secondary to kidney affections, for tubercular or other disease is apt to extend to contiguous parts. Evidences of severe disease of one kidney and of the corresponding ureter, while the other ureter and its surroundings appear healthy, would place the surgeon in a position to operate boldly.

In conclusion let me say that cystoscopy has an important place in the diagnosis of all obscure bladder or kidney diseases; that by the use of cocaine it can be performed without pain; that on account of its simplicity it should always precede if not take the place of surgical exploration; and that, if too much is not expected of it, when carefully performed it will not prove disappointing.

73 Cass Street,
Detroit, Michigan.

GONORRHŒAL CONJUNCTIVITIS.*

BY DON M. CAMPBELL, M.D., L.R.C.S (EDIN.).

This subject is one of the few upon which the general practitioner and the specialist can meet on common ground, and each feel equally at home. Moreover, it is a subject in which all public-minded citizens, whether professional or of the laity, should be and often are deeply interested.—I would like to say further in this connection that such common grounds of thought should be more assiduously cultivated. The strong leaning of medicine at this day and in this generation is toward specialism, and, while this is good and beneficial to a certain extent, in my opinion it frequently goes too far; specialists exhibit a tendency to become more and more exclusive, while the general practitioners are more and more alienated. Both thereby, undoubtedly, lose a great deal, and the former perhaps more than the latter, because they, as a class, need the broadening influence of minds possessed of extended and varied experience such as falls to the lot of the general practitioner or "family doctor" alone.

Gonorrhœal conjunctivitis is a vital subject, one in which opthalmology has made decided advances and can show considerable improvements in results. It is not only engaging the minds of professional men, but has been brought to the observation of legislative bodies, and with beneficent results. Further, it is a disease that, more than any other, is responsible for the large number of blind, partially blind and deformed eyes with which our eleemosynary institutions are to-day filled: in other words, it is a malady that, to a greater extent than any other, incapacitates its victims—denies them the light of heaven and removes from them the power to secure an honest and honorable living. What will be said when I assert that twenty-five to thirty per cent. of the blind people of the United States are in their deplorable condition owing to the ravages of this disease; that in the French Republic there are 40,000 blind, of whom 18,000 (nearly fifty per cent.) are claimed as victims to gonorrhœal ophthalmia? To this may be added the undoubted fact that this is a filth disease—that it arises from vice and the unchaste and unclean sexual lives of its victims or their progenitors; that it is largely preventable and almost wholly controllable! Thus it will appear we are treading upon very important and interesting ground.

Purulent ophthalmia may be defined as an acute specific infectious malady characterized by an inflammation of the ocular and palpebral conjunctivæ. The ætiology is, of course, the implantation and growth in the conjunctival sac and conjunctiva of the gonococcus. The disease always arises from another eye similarly affected, or from urethral or vaginal gonorrhœa occurring in the affected individual or one with whom he comes in contact. Finally, it may be conveniently divided into ophthalmia neonatorum in the infant and ophthalmia gonorrhœica in the adult.

It is the supervention of various complications that works so dire results and renders one anxious as to the final outcome of the case, and these are chiefly brought about by the extreme swelling cutting off corneal nutrition, or infection of a corneal abrasion by the purulent discharge leading to a suppurative keratitis, perforation of cornea, purulent iritis, and finally panophthalmitis and destruction of the whole organ by purulent infiltration of all its delicate tissues.

The prognosis is always good when the case is promptly seen and the patient placed under proper conditions of nursing, hygiene and treatment before complications have appeared; but after corneal infiltration has once taken place the prognosis must be very guarded. In any event, efforts to combat the disease should never at any time be relaxed, since often astonishingly good repair

*Read before the Windsor (Ontario) Medical Association.

will take place even under most unfavorable conditions.

The symptoms of the malady are so well known that it would be a work of supererogation to here enumerate them; the great swelling of the lids, the sudden onset and rapid progress, the thick purulent discharge, and the great chemosis, are unmistakable characteristics.

The greatly increasing number of blind people from gonorrhœal infection has led ophthalmologists throughout all the United States to seek some means of checking its ravages; and among these may be mentioned Doctor Lucien Howe, of Buffalo, who in the New York State Legislature introduced a bill making it a misdemeanor punishable by imprisonment and a fine for any nurse or midwife to neglect to report to a medical man the appearance of a purulent discharge in the eyes of a new-born child. Many other States have similar laws in effective operation, and the time is not far distant when such legislation will be universal.

What perhaps most concerns the practical physician is the management of the malady, and this may be divided into (*a*) prophylaxis and (*b*) treatment after the malady has become fairly established. As regards the former, it is the first duty of the physician to prevent the introduction of the germs into the conjunctival sac. In the case of a child still unborn it is well to give attention to the mother—to disinfect and keep disinfected the parturient canal; to exercise great care after the infant is ushered into the world, avoiding in cleansing the eye and its environments anything that can by any chance convey germs to the mucous membrane. Absolutely perfect cleanliness and asepsis is what should be aimed at and secured. Should the practitioner, however, be doubtful as to his abilities in this direction, there are two procedures available: First, the method of Credé, viz., dropping into the conjunctival sac of the new-born a single drop of two-per-cent. silver-nitrate solution: Second, the Hegor-Kohn method, which consists of thorough disinfection of the eye and its surroundings by bichloride solution (1:1000).—In case of an adult suffering from gonorrhœa, it is usually enough to acquaint him with the severity of ocular infection and teach him the necessity of cleanliness and care.

With these methods it is possible to very greatly reduce the number of cases of gonorrhœal ophthalmia; but, pursued never so carefully, there would still remain cases of ophthalmia neonatorum, as well as gonorrhœal ophthalmia in the adult. It is therefore essential to know how to handle such.

There is no place in the whole field of therapeutics where the old saying "Cleanliness is next to godliness" is so applicable as in the management of gonorrhœal ophthalmia. Upon the thorough and systematic carrying out of the physician's instructions as to the cleansing and disinfection of the conjunctival sac everything depends. But before entering upon the details of treatment I might say that the chief change which has taken place in the management of these cases of late years has been the employment of milder means; more dependence is now put upon thorough cleanliness and disinfection, and less upon strong astringents and surgical interference. Now a special nurse, or the equivalent of one, is detailed to take charge of the case. The eye is thoroughly cleansed every fifteen minutes, day and night, the lids being thoroughly everted and the mucous surface irrigated with boric acid and borax solution; besides, three times daily, the lids, after eversion, are syringed with copious quantities of warm bichloride solution (1 to 10,000), half a pint to a pint being used each time. Once daily, also, a mild solution of nitrate of silver (five or ten grains to the ounce) is carefully applied. In the early stage, cold compresses are of value, but these should be discontinued as soon as the purulent discharge is well established or any anxiety is felt about the integrity of the cornea. Should any corneal affection appear, atropine should be used. I would thoroughly condemn any such procedure as conjunctival scarifications, because it is not good surgery to make a large number of raw and absorbing surfaces which are to be continually bathed in the conjunctival secretions. The galvanocautery may be of value in controlling a sloughing corneal ulcer.

In closing, allow me to refer to three interesting cases—one reported by Needham, and two of my own:

Case 1.—The fifth child of a gonorrhœal mother was born with the membranes intact, but notwithstanding great care developed ophthalmia neonatorum, as had the four former children. Here is a query: Did this child's eyes become affected through the amniotic liquid, or later?

Case 2.—Child five years old, female; had a purulent vaginitis for several weeks, when she developed a typical gonorrhœal ophthalmia.—Chiefly interesting on account of the child's age.

Case 3.—Young man eighteen years old, who had never performed the sexual act, consequently never had gonorrhœa nor any form of venereal disease. He developed double gonorrhœal ophthalmia of a very severe type, and when he came under my care one cornea had already sloughed; the other eye made a perfect recovery. This case is interesting in that it shows an adult may contract the disease and still be perfectly innocent of any sexual misdemeanor. The history of this case proved conclusively that the infection came through the medium of a towel used by the patient in common with a fellow workman who was suffering from gonorrhœal urethritis.

39 Fort Street west,
Detroit, Michigan.

SPERMATO-CYSTITIS—A NEGLECTED COMPLICATION OF GONORRHŒA.*

BY BURNSIDE FOSTER, M.D.

My attention was first called to the seminal vesicles as the seat of trouble in certain genito-urinary disturbances by an article by Lloyd, of Birmingham, which appeared in *The Lancet* some time during the fall of 1891. Since then I have studied cases of a certain class from a very different point of view from any before entertained, and have acquired considerable information which was new, and which has enabled me to benefit my patients in a way which I had previously been unable to do. Recent articles by Fuller and Vaughan have also been of great interest and assistance, owing to new light on the subject and in corroborating my own observations.

A glance at the topographical anatomy of the posterior surface of the bladder and the deep urethra will show the intimate relationship existing between the vesicles and the vas deferens—and it will be at once apparent that any infective process extending from the urethra to the epididymis would be extremely likely to attack also the corresponding seminal vesicle. Since I have accustomed myself to the routine examination of the seminal vesicles in all cases of posterior urethritis and epididymitis, I have become convinced that the infection, to a greater or less degree, is much more frequent than I had previously had any idea of. Acute vesiculitis undoubtedly does occur as a complication of posterior urethritis independently of epididymitis or of prostatitis, but it is, I believe, a rare affection. It is probably, however, frequently overlooked, because the diagnosis can only be positively made by digital examination of the vesicles, a proceeding which few physicians are accustomed to. When this condition exists the vesicles can be readily felt by the forefinger in the rectum, the patient standing with the body bent to nearly a right-angle, counter pressure being made with the other hand over the pubes. A sensitive oval fluctuating swelling on one side or the other, just beyond the posterior border of the prostate, will be felt. The size may be from two and a half to three inches in length and perhaps three-fourths of an inch in breadth. The feeling is very characteristic and cannot be mistaken, although a little difficult to describe.

The more common disease of the vesicles is subacute or chronic inflammation, and this is seen long after the symptoms of the original trouble (gonorrhœa) have disappeared. I have never happened to see a case of this kind where there was not a previous history of gonorrhœa, but I can readily understand how the condition might be caused by prolonged sexual excesses or masturbation, as has been the experience of other observers.

The symptoms presented by individuals suffering from this affection are, as might be expected, various, and of course they depend somewhat upon the presence or absence of other conditions than the one I am now considering. There will nearly always (always in my cases) be a history of posterior urethritis, and quite commonly of epididymitis;

*Read before the Section of Practice of Medicine of the Minnesota State Medical Society, June 19th, 1895.

a slight but persistent urethral discharge, which has proved rebellious to all treatment, is a constant symptom, and this is always accompanied by some form of sexual disturbance. The usual complaint is constant sexual desire, with diminished power. There may be frequent emissions unaccompanied by pleasure or satisfaction, and often followed by a dull aching pain in the perineum. After straining at stool the patient will occasionally notice that a little viscid yellowish material escapes from the meatus. This symptom is always the cause of much apprehension, but is not necessarily of any importance, for it often occurs in perfectly healthy individuals who indulge frequently in sexual intercourse, and the exuded material may be simply prostatic secretion—in cases of vesiculitis, however, I have frequently found it to contain pus, a few blood-corpuscles, and more or less feeble or dead spermatozoa. Frequent and painful erections, with involuntary emissions, has been a prominent feature in a few of my cases, and in one the seminal fluid was quite bloody. Unless there exists a posterior urethritis or cystitis, micturition may not be interfered with, although at times, particularly after intercourse or ejaculation, it is frequent and painful. A prominent feature of the clinical picture of a typical case of chronic vesiculitis is the severe disturbance of the nervous system. The patient is usually worried, mentally depressed, and often profoundly melancholic. This is particularly the case when, as commonly happens, he relates that he has carried his woes from one doctor to another, has read everything he could find on the subject of sexual diseases, and has patronized all the secret remedies and quacks he could find the money to pay for.

When a patient presents himself with the history and symptoms as above described, the first problem is of course the diagnosis. There are three essentials to a complete examination of such a patient: Examination of the urine, examination of the urethra, and examination of the seminal vesicles by the rectum. Of the first two I shall not speak, as all are familiar therewith, but the last is usually neglected and without it an accurate diagnosis is impossible. It is usually possible after a little practice to demonstrate the normal seminal vesicles with the finger in the rectum, counter pressure being made with the other hand above the pubes. The diseased vesicle is always enlarged and can be readily palpated and some of its contents expressed, by gentle manipulation, into the urethra. The patient should present himself with several hours' accumulation of urine in the bladder, and the rectum empty. Before making the rectal examination a small amount of urine should be passed into a test glass, for the purpose of washing out the anterior urethra. The examination is best made with the body bent at a little more than a right-angle and supported by resting the palms of the hands in the seat of a chair. The right forefinger, if of ordinary length (the longer the better), inserted into the rectum, will reach well beyond the posterior edge of the prostate, and the vesicles will be felt, one on each side. The feeling of a distended vesicle has been well likened by Fuller—to whose article on this subject I desire to express my great indebtedness—to that of an engorged leech. The size may vary from but little larger than normal to that of a hen's egg. There is usually some tenderness, but unless the inflammation is quite acute there is not much pain complained of. By gently stroking or "milking" the distended vesicle, its contents may be forced out into the urethra, and at the conclusion of the examination the patient should again urinate into a glass, when this material can be obtained for examination.

The object of treatment in these cases is to restore the muscular tone to the vesicles; and to accomplish this they must be emptied at regular intervals, as, owing to their prolonged distention, they have lost their normal tone and are unable to empty themselves. Various appliances have been devised to exert pressure on the vesicles through the rectum, but none are as effectual as the forefinger of the surgeon properly applied. The patient should present himself at regular intervals, varying from five to eight days according to circumstances, and the vesicles manipulated by the surgeon after the manner above described. A little practice and the patient's sensations will determine the amount of force to be used. The relief which has followed the first two or three treatments has been

astonishing in nearly all of my cases, and as yet I have seen no bad results. All urethral instrumentation must be suspended, and if it seems necessary to wash out the bladder it is better not to use a catheter but to introduce a small tube into the opening of the urethra and allow the pressure of the fluid, by elevating the wash bottle, to overcome the sphincter vesicæ. This process of "milking" or "stripping" the vesicle, as Fuller has aptly termed it, should be continued as long as any distention of these sacs can be felt —this time will vary from two to five or six months,—and in the vast majority of cases a very favorable result will be accomplished.

I need not speak of the various indications for tonic and hygienic therapeutics, which will of course be helpful as accessory to this method of treatment. But there is one caution which it is important to bear in mind: In a certain number of cases where the symptoms refer to the vesicles as the seat of trouble, it may be due to tuberculosis, and this must be carefully eliminated before attempting any local treatment. Digital manipulation of a tubercular vesicle is sure to make the condition worse and to add greatly to the patient's danger and discomfort. In addition to the other signs of genito-urinary, or perhaps general, tuberculosis, the vesicle has a characteristic feeling; instead of the smooth thin-walled sac, the wall is thicker and nodulated and may even have what might be described as a "shotty" feeling. Careful examination of the expressed material may show the presence of bacilli.

I hope that those of my readers who have not been accustomed to use the method of examination and treatment described will be inspired to do so, for thus may be relieved a class of cases which have hitherto proved very obstinate and given the practitioner much trouble and anxiety.

St. Paul, Minnesota.

PIONEER PRACTICE OF MEDICINE IN THE NORTHWEST.

BY P. A. WALLING, M.D.

The subject I have selected is not new, but has about it this phase of originality—that each one's experience is unique, and if properly portrayed presents vivid and interesting points that are like the old and oft-repeated story of the Cross—always new.

For a physician born, brought up, and educated in the city to undertake a task like this, would be as difficult and full of impossibilities as for a countryman to describe a society social gathering or the management of a great hospital in the city; and while, therefore, I should feel unqualified for the latter task, I may unostentatiously say I feel perfectly qualified for this burden, having first seen the light in a country "shantie," and all my days, except the few years of professional study, having been passed amid country scenes.

I came to the place where I am now located within two years of its first settlement by white people. We were then fifty miles from a railroad, and practically, though not nominally, fifteen miles from a postoffice, from which our mail was brought by volunteer service once each week. The country was sparsely settled, but improvement was rapid, and though it was nine years before we had a railroad it was not nearly so long before we had efficient daily mail service and many other advantages of a civilized community.—I perhaps need not say that poverty compelled a continuation of experiences like these, for had it been otherwise my stay in such a place would have been too short for narration.

I considered myself well enough provided with education to serve as a backing against opposition, and with a determined will and the highest hopes I went to work to build for myself a practice and for my family a home. Instruments were scarce, and of efficient counsel there was none. What was done had to be done alone, and more often than I could wish results had to be left with a higher power.

The territory over which my rides extended covered an area of about ten by fifty miles. The roads are good at nearly all seasons; but the winter temperature is extremely low and that of the summer very high, so that between 55° below zero and 100° above the work of my life has been accomplished.

On the coldest night I ever saw, when the thermometer registered 55° below zero, I

rode fourteen miles and attended a miscarriage. At 9 P.M. my work was done and I was ready to return home, but, the night being so cold, I thought best to stay until morning. The only bed in the house was occupied by the patient, and the nature of the case and the presence of the husband effectually precluded retirement, so I sat by the stove, which I all night plied with dry wood, and though clothed with heavy garments, including a new buffalo overcoat, I secured so heavy a cold as to be prostrated for days. For this attendance I received the munificent sum of eight dollars, after waiting about a year and threatening forcible collection.

I have often been called out of a warm room and bed at 3 A.M. when the thermometer registered 40° below zero, and, after hitching up my own horse, have ridden eight or a dozen miles in the face of a fierce blast, and without freezing any portion of my person.

I have run after patients until nearly worn out, only to be told I was welcome to my pay *if I could get it.* I have been cursed for diagnosing and reporting contagious diseases; have been discharged for being honest and truthful in my statements, and refused paying employment because I would not stoop to acts which the law holds to be criminal. In the face of all this I have not lost faith in humanity, for on the other hand there are always true men who honor an honest physician, and I often think of old Elijah—who, when he thought everything had gone against him, found seven thousand who had never bowed the knee to Baal,—and take new courage.

There is a great tendency among frontiersmen toward perfection — in their own minds—in almost all lines of business. The uncouth rowdy generally knows all about the law, and exactly how a good sermon should be prepared and delivered; how the best actors equip for the stage; and how easy a matter it is to run a bank. As to medicine, they are "out of sight," and on the slightest provocation the most ignorant will set up as practitioners with no preparation whatever. While this is to an educated man wonderful, it is not half so strange as the fact that these impostors (and the greater the imposition the more following it secures) will so easily gain access to the confidence of men who hold themselves to be well informed.

I am acquainted with a self-styled "Doctor" who bases his right to practice altogether on the fact that he "practiced" in the State prior to 1887, who cannot write his own name, and whose materia medica consists of golden seal, sweet-flag, liquorice, alcohol, and water; he is in continuous practice in our own and adjoining counties. This man puts up in a large bottle medicine that costs about twenty cents, fills the bottle with water, and furnishes it to parties at $2.00—parties who refuse to go to an honest physician and pay fifty cents for a diagnosis and prescription. Another of the ilk is possessor of a glass lens, or something similar, which he professes was made by a prisoner in some far-off country, who made only three and then died. This glass he places over a part and claims by its aid to "see right through a man" and actually view the morbid processes of the internal economy. I suppose he would read the inmost thoughts if he could read at all—which he cannot do, having never mastered the alphabet. To one of his patients he declared, as he held the "instrument" over the chest of the latter, that he could see clear to the essential procreative organs at will—though his statement was scarcely clothed in so elegant terms. This man came to our town during the "hard times" and took out therefrom $118 in one day—this at a time when regular physicians were averaging about fifty cents a week cash business. Happily such creatures are "only remembered for what they have done," and, though for a time they run high and cause a great commotion, they very often have to move around and always to a lower sphere.

Dishonest practitioners are the bane of the profession anywhere, but it seems much more so in a new country; but this is perhaps owing to the fact that country doctors are almost invariably at war with each other. City practitioners who go into dens and low places probably see more of squalor and filth than it is possible to find in country practice; but, on the other hand, it is possible to do a large business in the city and not reach a place where aseptic surgery could not be practiced successfully. In pioneer practice this is not so; in fact, aseptic habits

may as well be abandoned and sepsis confronted by the free use of antiseptics and a brilliant faith in an unseen Power.

Here we find filth of all kinds, in all places; old pipes, old boots, dirty dish-cloths, clothes from the barn, unwashed garments from everywhere, swill, feed, potatoes, onions, cabbage, and emanations from bodies long unbathed, form a subject for the olfactories which is very often both suggestive and interesting. To undertake to manage a case with such surroundings on the aseptic plan is simply out of the question; and a free use of a solution of bichloride and a firm reliance on a Divine Providence is about all there is left to do.

There are some things about pioneer work which, while they might not seem pleasant at first, are really safety-valves in country practice. In pioneer work a man is not expected at first to have an office. One room of the house serves the double purpose of sitting-room and place of business. His books, for want of a case, are packed on the floor or on a dry-goods box; and his instruments he can carry in his pocket and they are always with him. Those used for amputations can be made to serve the additional purpose of sawing the wood and cutting the bacon for breakfast. His horse he can use to draw his wood and plow his garden. The time between cases can be occupied in cutting the wood, hoeing corn, cultivating pumpkins and potatoes, making fence, improving the lawn, and repairing his buildings; always, however, being careful to say to an unexpected patient that he is doing this for exercise and to relieve the monotony of his extensive practice.

A country physician is expected to, and really should, know nearly everything in medicine—much more than is expected of city physicians who have so much better opportunities for special lines. He must practice midwifery; be able to diagnose and treat alone all the complications of labor—anæsthetize, use the forceps, turn, perforate; perhaps at a moment's warning, without counsel, and mayhap without proper instruments, open the abdomen or lose his patient. He must diagnose and treat at least all gynæcological diseases, from pediculus pubis to ovarian tumor. He must extract teeth, prescribe for bald heads, barber's itch, and all skin diseases. He must be able to recognize diseases of the eye, ear, throat, and lungs, perform an amputation or resection, trephine the skull, reduce or operate upon an inguinal or femoral hernia. In short, he must be ready to meet at a moment's warning anything from a slight "cold" to an amputation of the hip-joint; and woe be to him if his education or courage should fail, for country critics are sharper than a surgeon's needle, and no talk will be spared to make the fact patent that he failed in such or such a case, while if he succeeds it is only a matter of course.

When he is through, and his horse properly stabled and fed, when he has cut the wood for the night and fixed other things in proper shape, he puts the whole day's work on the books, calls at the store, buys a little coffee and codfish to enable his wife to make a breakfast, has it charged (for money he rarely has, except at long intervals), and goes home to retire, only, perhaps, to commence the next day's work by turn of midnight.

Books, journals and medical societies are few and far between, for expenses *must* be met, mouths *must* be filled, and clothing, in this rigorous climate, is not to be ignored. When all necessities are provided for, too often other things are out of the question.

When collection time comes, what a fine variety he has at his command! Oats, hay, flour, potatoes, meat, wood, straw, work, and in fact anything that can possibly be used or disposed of in any manner, is taken and credited on account. Did I mention money? No? Well, he does now and then get money. Silver dollars without holes punched in them are sometimes paid to a country doctor; but this is a rare occurrence and is not expected to be the rule. A short time since a man came to me and wanted to know if I could take railroad ties for a small bill. I told him I would do so, but he has so far failed to bring them.

Now I have a word to say in behalf of the practitioner who does not follow strictly in what he knows to be the best course. Is it wonderful, after all the foregoing varied experience, that a country doctor sometimes takes to drink—that he sometimes tries to drown his sorrows and perplexities in the flowing bowl, or stifle his feelings with the

too well known narcotic? Ought not sympathy and love to go out and environ the one who is thus degrading himself; and rather than condemn too soon, would it not be better to hold him with an encouraging notice or a favorable recognition and thereby lead him to take a more hopeful view of life and its advantages, and to see that with true perseverance he may at some future day be able to hire his wood cut, pay cash for his groceries, and take a medical journal even though it cost no more than one dollar per annum?

I would not have you conclude by this paper that I am discouraged or disheartened. On the other hand, I am full of hope for a brilliant future. Pioneer life in our part of the country is a thing of the past. The telegraph and railroad bring us into close communion with the world, and by their use any of the physicians of the city are within about fifteen hours of our village, two hundred miles away.

An abundance of instruments, good libraries, and a reasonably appreciative community make the practice of medicine less and still less onerous; and I yet hope the future will bring that millennium when country doctors may counsel together without enmity and be so far reconciled as to bury the hatchet and not remember where it lies concealed.

Park Rapids, Minnesota.

A NOVEL METHOD OF ASSISTING UTERINE INERTIA.

BY FRANCIS PERCIVAL COWAN, M.D., C.M.

I wish to place before the profession a singular and unlooked-for circumstance. It is sometimes strange how one discovers the different uses (not otherwise mentioned) of medicinal preparations, if only possessed of observant faculties; but when one unexpectedly *stumbles* upon something useful and practical, he is apt to become reticent and await with pleasure, patience and expectancy the further outcome of investigation. Such were my feelings when I found by repeated experiments that Glycerin Suppositories are of more value than merely as agents for the cleansing of the rectum; in fact, I may say they are of greater value to the obstetrician in assisting prolonged cases of labor, due either to inertia or to the nervous temperament of the mother whereby she becomes unable to assist herself. Having reached such a conclusion, I will now relate the peculiar incident that led to it.

Possessed of a somewhat extensive midwifery practice, and having by repeated experiences learned the advisability of having the bowels thoroughly well cleansed, for the comfort of both patient and accoucheur, it has been my custom to carry a large bottle of Parke, Davis & Company's glycerin suppositories. One day I was called in a hurry to attend a young woman with her first-born. Not having been previously engaged for the case, I found upon my arrival that the necessary preparations had been overlooked. After the usual cautions I proceeded to examine, and found the os uteri well dilated, membranes unruptured, parts small, and pains of a very weak nature with long intervals between. Upon inquiry I elicited the fact that she had then been in labor about twelve hours, but it had not been considered necessary to send for a physician, the pains being so very weak. Thinking I had a long and tedious case before me, I adopted my usual routine practice of placing a glycerin suppository in the rectum. It had not been long *in situ* when my patient implored me to remove the "horrid thing," as it caused very severe pain. I assured her, however, that the suffering thus induced would cease as soon as the bowels moved. Presently, and much to my surprise, I discovered the pains were those of labor, the intervals being quickly shortened.

After eight or ten strong pains I again examined and found little or no progress of the head; and at the persistent and repeated requests of my patient I removed the suppository—that is, what remained of it. Immediately the pains ceased and the intervals again became lengthened. After waiting for an hour or more, it suddenly occurred to me the glycerin suppository previously placed must have acted otherwise than expected—that in fact it might have stimulated the uterus to activity. Anxious to determine if such were the fact, I reintroduced a suppository in the rectum, assuring the woman that this time it must remain. As a result, I was soon rewarded by increased uterine contractions

with hard labor pains. Then I resolved to learn something new—I resorted to frequent examinations, taking the time between each pain. Gradually but quickly I noticed the advance of the head, and when it was well down upon the perineum, the latter being very rigid, I placed the patient upon her left side in all readiness for delivery. Supporting the perineum, the head was shortly born, but at the same moment the remaining undissolved portion of the glycerin suppository "popped" out. Needless to say, I was amused as well as gratified by the novel experience and use of the suppository.

Before making known the above, I experimented upon twelve cases, the notes of which I have in my possession, and in all these I conclusively proved to my own satisfaction the efficacy of glycerin suppositories in such cases, and now would not feel at all armed without them.*

In conclusion I will be pleased to hear from any other practitioner upon the subject, as well as gratified to learn that others have had similar results.

Toronto, Ontario.

MANKIND AND BACTERIA—A HISTORICAL LEGEND.

BY E. B. WARD, M.D.

'Twas a million years, we may safely say—
  Yes, a hundred million years ago—
That a cell dropped out of the Milky Way
  And fell to the earth, which was hot, you know—
    Just right for incubation.
And the cell increased and it multiplied
  Like flakes in a howling winter's storm,
Till at last they were by some means allied,
  And took on action and shape and form
    As a certain kind of creation.

And so the proliferation went on
  From lower to higher grade upon grade,
And millions and cycles of years had gone
  While Nature worked at creation's trade—
    For she is no fool or a flunkey—
Till at last, as she graded up the cell,
  She reached, as she fancied, the highest point,
When from her fair fingers a creature fell,
  Supple and active in every joint,
    But it proved to be a monkey.

"Now," said Dame Nature, "you have a start;
  While I leave you to take a needed rest,
Just go right onward and do your part,
  And in, say—ten million years at the best—
    You may slightly improve on Nature.
And harkee," said she, in a pleasant way,
  "You better go slow as you climb the pole
And part your hair in the middle, I say,
  At least till you compass the wished-for goal,
    Where perhaps I shall see you later."

So the monkeys grew and multiplied,
  And millions on millions of monkeys more
Traversed the forest and lived and died,
  Or were killed by some horrible angry spore
    Which then were as large as a vulture.
Old monkeys kept from the water because
  Bacteria then were as large as whales,
And had shark-like teeth and terrible jaws,
  And they bit off some of the monkeys' tails,
    Who bathed and were up in culture.

And it came to pass in those bygone days
  That the tailless monkeys formed a clan,
Who prided themselves in various ways,
  But the other monkeys called them man
    On account of their man-gled condition.
Still the monkey-man in his later years
  Drove all bacteria into their cells,
And made it so hot for the horrid spores
  That they flew in space or down into wells,
    Quite hidden from all observation.

So they disappeared and were seen no more,
  And the monkeys willingly called a truce,
But still it was claimed by the long-tailed lore
  That these vicious animals had their use
    To a certain extent beneficial.
But the monkey-man, forgetting perhaps
  The method by which his estate was changed,
Or grieving maybe at his own mishaps,
  Decided the matter was all arranged,
    In a manner quite sharp and judicial.

This legend goes on and relates farther still
  How the monkey-man made a vigorous flop,
While his head grew large and his iron will
  Resolved that the growth of his tail should stop,
    And end at the os coccygeus;
And how after practicing millions of years,
  His progeny stood bolt upright like men,
And shortened their noses and drew in their ears,
  Developing muscle by increase of ken,
    Till they got to be same as you see us

And so by an easy gradation, you see,
  These monkeys grew wiser and wiser each day,
Until they reached such a high degree
  Of culture and wisdom as you may say
    That language came to teach them.
Then they strutted about and put on airs
  And smoked cigarettes in a pompous way,
And invented cloths which removed the hairs
  From their bodies, while slowly, day by day,
    The sun had a chance to bleach them.

*Doctor Cowan also calls our attention to notes relative to this same subject appearing in the *Medical Annual* (England) and *International Medical Annual* (New York) for 1895, page 351.—ED.

And yet after millions of years had gone,
The monkeys still differed on this one point,
And they argued the question pro and con,
But were everlastingly out of joint
On the question of cause and creation.
Some said if bacteria raised up the clan
'Twere better to follow them not too far,
Because they might still be useful to man;
While others persistently called for war,
With clamorous vociferation.

And so to this day—but I fear to tread
On such tick'lish ground—there's blood on the moon,
And scientists fain would fill us with dread
To think that the insects are out for noon,
As tho' such a wonder could be.
They push their notions with blistering zeal,
Deriding opposers with sneering shout,
Breaking all the profession over the wheel,
And think all doctors inclining to doubt
Ought to be damned—and they would be.

And still methinks there's a much better way
Out of the trouble and out of the wood;
This is, to establish, as you may say,
A *modus vivendi* that will hold good
As against any future osmosis.
Give the *vis medicatrix naturæ* a chance—
A free horse should never be hurried, you know—
And with every endeavor make out to enhance
The efforts, which every one knows are not slow,
Provided by phagocytosis.

Laingsburg, Mich.

MISTAKEN NOTIONS ABOUT GLASSES.*

BY F. C. HEATH, A.M., M.D.

The mistaken notions of the laity on medical matters are proverbial, and some of these relative to the eye seem to be shared by a portion of the profession. I wish briefly to point out some common errors in regard to glasses.

The general idea as to the object of glasses is not altogether correct. Most people would say they were for the improvement of vision, but the relief of eye-strain is a more important indication in many cases. Not infrequently the glass a person sees through best (especially on the first examination) is not the best for the eye; for example, a weak concave lens may give a hypermetrope sharp vision by exciting the ciliary muscle to overaction, or in case of spasm of that muscle, yet by adding to the work of the muscle it will increase the eye-strain.

People are often in error as to the effects of glasses: they imagine that from an oculist or optician they can secure lenses that will give perfect, immediate and permanent relief, no matter how much they may have abused their eyes or how long the trouble may have continued; furthermore, they expect to continue to abuse and overwork their eyes as before. But overworked eyes need rest as much as an overworked or strained arm or leg, and relief of the strain usually comes gradually; moreover, it generally takes time to become used to glasses, as the eye muscles do not immediately relax.

Some object to wearing glasses from fear of becoming slaves thereto; they imagine they may always have to wear them and that after a time they can never see as well without them as before. This, however, is true of a portion of the cases only, more particularly those having high degrees of error, and in such, instead of an objection, it should be regarded as quite the opposite on account of the greater enjoyment of life and increased usefulness through relief of eye-strain and improvement of vision. The reason why the eye in some cases sees less without the glass than before, is because it becomes accustomed to allowing the glass to do for it some of the work it had formerly done for itself. In many cases, however, the vision improves either with the glass or without it if the glass has been worn for some time. Quite frequently it is discovered the eye needs the help of glasses for a short period only, and then, the work having lessened, the system improved, or the eye-strain being relieved, they may be dispensed with.—This is most likely to prove true in low degrees of error. With regard to near-sightedness, which progresses in so many cases, the opinion of the best authorities is that it remains stationary where a full correction is worn from childhood.

Those who refuse to wear glasses on account of the annoyance are guilty of exaggeration, if they are not entirely mistaken. The annoyance is usually temporary and should have no weight in comparison with the advantages to be gained; in fact, it is no uncommon occurrence for a person to hunt for his glasses

*Read at Mitchell and Delavan District Medical Societies.

when he has them on, especially after he has worn them long enough to become accustomed thereto.

A very widespread idea is that all persons holding objects near the eyes are necessarily near-sighted; but the oculist knows this is done in all cases of defective sight, whether due to opacities in the media, disease of the fundus, astigmatism, myopia, or high degrees of hyperopia or far-sight—the reason in the last-named condition is, because the image formed on the retina from the object at the proper focal distance (so far away) is very small, and the patient prefers a large image to one more sharply defined, especially as his contracted pupil cuts off many of the circles of diffusion which would otherwise be confusing. There is also an apparent near-sightedness in cases of spasm of the muscle of accommodation, where the patient may be actually far-sighted when the muscle is relaxed or in its proper condition.

The question, "How is it that a child sees well with his grandfather's spectacles?" suggests another mistaken notion—that glasses go by age. Of course, old sight usually comes on at about the age of forty-five and increases as one grows older, near-sight is sometimes progressive, and some latent far-sightedness may become manifest as the lens loses its elasticity with advancing years; but aside from such considerations as these, glasses do not go by age, and the child sees with his grandfather's glasses only because both need convex glasses, one to bring back the near-point in old sight, the other to bring rays to a focus properly on his retina in far-sightedness.

The frequency with which glasses are seen upon school children is so much an object of remark as to imply that they are often worn when not needed. This may be true in some cases, for with many rest and attention to the general health would so improve the eyes as to render spectacles unnecessary; but it is far more probable that more go without lenses who would be helped by their use, and relieved from headaches and nervousness, and enabled to see so much better as to enable them more successfully to compete with their companions. A large proportion of the pupils called dull are misjudged—they may either appear dull from defects of sight or hearing, or be actually rendered backward by such handicaps.

The preference shown by so many for eye-glasses rather than spectacles often leads to serious mistakes. Relief of eye-strain and preservation of sight are far more important than any notions as to fashion or personal appearance. It is important in most cases that patients look through the centre of the lenses, and that the axis of cylinders and angles of prisms be maintained exactly as ordered. Hardly any eye-glass will answer this requirement, though the bar-spring comes nearest to doing so.

In the use of protective glasses, mistakes are likely to occur. Colored glasses are objectionable, allowing heat rays and irritating color-rays to pass through. Blue, which excludes heat rays, is the least objectionable, and is frequently worn with comfort. Smoked glasses are to be preferred generally, as affording greater comfort. Too dark a glass may do harm, causing eye-strain from efforts to secure vision through it, and as a general rule it may be said no dark glasses should be used unnecessarily, lest they render the eye more sensitive to light than before. They serve a very useful purpose, however, in case of eyes actually diseased or those extremely sensitive to light.

Perhaps the most mistaken idea about glasses is that anybody can fit them. Considering the difficulty of accurate fitting, the harm from unsuitable glasses, the danger of having spectacles applied to diseased eyes needing other special treatment, and in short the fact that he who fits glasses should thoroughly understand the condition and needs of each eye and prescribe only after careful consideration of all the attainable facts in connection with the case, including search for concealed defects as well as manifest errors, every one should decline to relegate such work to druggists, jewelers, opticians, and pretenders of any stripe or kind. Accurate fitting requires the highest skill of the oculist, and "the best is none too good." He should have sufficient knowledge of medicine and diseases also to judge whether the symptoms complained of are primarily due to eye trouble, and how they can probably be best relieved. The most skillful man will find perplexing cases enough—what then is

to be expected of the incompetent and unreliable? Gould is right when he says: "The optician should stand in the same relation to the ophthalmic physician as the druggist to the general physician. The one should be as much forbidden by law to prescribe spectacles as the other medicine."

Indianapolis, Indiana.

TYPHOID FEVER.

BY W. H. A. YOUNG, M.D.

I desire to briefly state some of my experiences in this disease. It is not my purpose to give special symptoms or an elaborate history of typhoid fever, nor to determine whether or not it results from a bacillus in drinking-water, from adulterated milk, from cans rinsed with contaminated water, from microbes in the atmosphere, from oysters fatted at the mouth of a sewer, or from micrococci generated from the morbid conditions within the victim of its attack.

I do not consider typhoid fever a contagious disease; neither is it transmitted from one person to another by simple exposure. As a rule, the patient will have been more or less indisposed for some days. When the physician is first called to prescribe for him, he complains of a tired, worn-out feeling, pain in the head and body generally, sometimes chills, constipation, and insomnia. I have never been able to avert the disease, and not always able to recognize it positively until in its second week. When called to typhoid, if possible I place the patient in a sizable room, well ventilated, and remove the bed from the wall in order to allow easy access to all sides of it—I never submit to a feather bed. I commence treatment by relieving the bowels with a mild laxative and enema if required, and give the following: Tinctures of aconite and veratrum viridi, each five to ten minims, in four ounces of water, a teaspoonful every two hours, alternating with Euthymol, four drachms in four ounces of water, same dose. After the bowels are evacuated I give five grains of quinine, three minims of tincture gelsemium, and one minim of tincture nux vomica, in a solution of tartaric acid (five grains to ounce); order a sponge bath every morning; and rub the body over every night with a dry towel. If there is a tendency to diarrhœa, I use the following: Powdered rhubarb one and a half ounces, bicarbonate of soda one drachm, boiling water half-pint, sugar, a little brandy and essence of peppermint; a teaspoonful once every four hours. If more than two evacuations occur in the twenty-four hours, I add to each dose a powder of leptandrin, opium, and chalk or charcoal; if the stools are fœtid, two drops saturated solution of carbolic acid to the Euthymol mixture previously mentioned. If cough is troublesome, take two drachms fluid extract liquorice, fifteen minims fluid extract lettuce, ten minims fluid extract squill, one drachm essence of wintergreen, and simple syrup to make a four-ounce mixture, with which the throat may be moistened when there is an inclination to cough. Ten drops of tincture drosera may be added to the sedative mixture (aconite and veratrum) if desired. If the patient takes kindly to milk, I care for no other nourishment. I allow him water, crust-coffee and camphric tea for drink. I seldom give any stimulant until about the seventeenth day, or on approaching crisis, and even then cautiously.

Following this course, I have never had hæmorrhage or troublesome tympanites. It is essential that the physician place his hand on the abdomen and over the bladder every day, looking for soreness and a distended bladder—retention of urine will cause trouble and increase delirium. Following this course of treatment in a severe case of typhoid, the temperature will run from 101° in the morning to 104° in the evening. Everything else being even, ninety-seven out of every hundred should recover, convalescing in about four weeks.

Springfield, Mass.

DERMATITIS HERPETIFORMIS.

BY J. J. MOONEY, L.S.A. (LOND.).

Last summer a married woman, thirty years of age, while away at the seaside began to be troubled by a rash which made its appearance chiefly on the lower limbs. As she was only to be away ten days, she did not consult any one until she came back.

On examination I found a few vesicles scattered along the course of the external, middle and internal cutaneous nerves of both legs, the largest being over the internal cutaneous. Each one was seated on a small red base, and all exactly resembled the ordinary vesicles of herpes. The eruption gave rise to burning pain, in addition to itching.

In spite of treatment the vesicles dried up and scabbed off very slowly, taking nearly three months in the process; and they left patches of brownish discoloration on the skin that still persist. Patient was not pregnant, had no menstrual trouble, and seemed to be otherwise in good health, hence the onset of the eruption appeared to be connected chiefly with the change of air due to going to the seaside.

This spring a younger sister of the patient, aged nineteen years, and also married, came over to America with her husband. On the voyage and after arrival she was a good deal troubled with facial neuralgia. Within a few days after landing, an erythematous rash made its appearance in patches along the course of the musculo-cutaneous and internal saphenous nerves of the leg, and a day or two later manifested itself on the arms, where it chiefly followed the course of the musculo-spiral and internal cutaneous nerves. There were no vesicles unless the patient yielded to the temptation to rub it on account of the itching. It persisted for several months, but has now almost disappeared without leaving any marks behind. This patient was two months pregnant at the time of coming over to America, and, though a little pale, was otherwise apparently in good health.

These two cases are interesting as showing the family tendency, the liability to onset in a predisposed person on change of climate, and the general intractability, of the complaint. In both I adopted a general tonic treatment, iron and quinine, and iron and arsenic, with soothing local applications, but it seemed to run its own course in spite of all treatment.

Detroit, Michigan.

Rhus Poisoning.—The application of tincture of Blood-root to the poisoned surfaces will immediately relieve the itching and burning and quickly cure.—*Exchange.*

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

MALARIA AND SOME OF THE NEUROSES.

Editor MEDICAL AGE:

I wish to give you two formulæ exceedingly useful in my hands, and that may also prove of benefit to others, in case you consider them worthy of place.

From a pharmaceutical standpoint it is possible one might not consider the first very eligible, yet it has been most satisfactory in my hands, which is, of course, its chief recommendation.

I have frequently encountered cases of chronic malarial toxæmia in which quinine sulphate appeared to be of little benefit. The trial of Peruvian bark secured fairly good results, but I found considerable difficulty in administering it. Finally I resorted to the best powdered yellow calisaya bark, and extracted from it all that water and dilute phosphoric acid would dissolve; the finished product represents ten grains of calisaya bark and fifteen drops of dilute acid (to which I add sufficient aromatics, sugar, etc., to make it palatable) to the fluidrachm. The result is a beautiful syrup, not at all disagreeable.

As for the advantages of the foregoing, phosphoric acid can be taken internally for almost an indefinite period of time, and has not the objections of sulphuric acid, the usual solvent used for cinchona alkaloids. The preparation is a general tonic of value; it holds in solution the calcium found in calisaya bark; and it possesses the advantage of offering the total active principles of the drug, which in my experience are more efficient than merely one of its alkaloids. I do not find the mixture in any way depressing, and it is most beneficial in certain forms of nervous disease and in low fever, as well as in malaria.*

The successful "special treatment" of nervous diseases consists chiefly in intelligently removing the pathological conditions from the affected viscera. I have used large quantities of the following mixture in nervous trouble due to gastric derangement. Its therapeutic range is quite apparent. It has been three generations in my family, but I know nothing of its original source. Its composition is: Coarse ground rhubarb, coarse ground golden seal, coarse ground cinnamon, dried peppermint leaves, of each

---

*It is probable the author of this paper would secure the same results from Esencia de Calisaya. —ED.

one-half pound; alcohol (98-per-cent.), seven pints. Mix, let stand for five or six days, then pour off tincture; next percolate through the drug residue ten gallons of hot water. To the first-made tincture add one-half pound carbonate of potash and two ounces of gum camphor dissolved in one pint 98-per-cent. alcohol. Shake well together, add to the water filtrate from the dregs, and finally add twenty-two pounds of sugar, and again filter.

This I find particularly valuable in the summer complaints of children. It is a sort of expansion of so-called "Neutralizing Cordial," formerly so much used, but to my mind a decided improvement over the latter.

Most sincerely yours,

THOMAS S. BLAIR.

218 Locust Street,
Harrisburgh, Pa.

ANTISEPSIS AND ANTI-OPIUM.

Editor MEDICAL AGE:

The remarkable triumphs of the Woodbridge treatment of aborting typhoid fever furnish an abundance of food for thought, particularly as it is an achievement hitherto deemed impossible. Twenty years since, every practitioner believed this malady must run its tedious course—a course that too often ended fatally; but Doctor Woodbridge loses no patients and aborts the course of the disease, all by means of a strictly rational and radical method of treatment. There are no palliatives, no anodynes, no opiates; all is consistent, antiseptic, and scientific. This to me appears the most glorious and unequivocal stroke of Galenic genius which modern medicine has ever offered—that is, if we accept Doctor Woodbridge's report as it stands. Says Sir James Watson:

> There is one point in the treatment of fever of exceeding importance, and of much nicety: I mean the use of opiates. If they are given inopportunely, they are apt to puzzle and perplex the case. You do not know how much of the disposition to coma is owing to the disease, and how much is the consequence of the remedy. Again, you may usually augment the natural tendency to coma, and lull your patient into a fatal stupor. But when judiciously administered, opium will often save a patient who would inevitably sink without it.

If we intelligently seek intestinal antisepsis we may then bid good-bye to opium. The new method of treatment, moreover, suggests that galenicals may be more successfully relied on for the relief of appendicitis than the modern surgeon is at present willing to admit.

ARTHUR DE VOE.

Seattle, Washington.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., AUGUST 10th, 1895.

Editorial.

THE INDEX MEDICUS.

In the last issue of THE MEDICAL AGE (page 436) mention was made of a desire expressed in various quarters for reëstablishment of the *Index Medicus*. It will be remembered that a proposition was made, through the columns of the *New York Medical Journal*, by Doctor Charles E. Sajous, that those interested in this valuable periodical should each subscribe twenty-five dollars annually towards its perpetuation. The remarks of our New York contemporary, coupled with our own on the occasion mentioned, seem to have borne good fruit, as we have just been informed by Mr. Geo. S. Davis that he has received checks for twenty-five dollars each, aside from that of Doctor Charles E. Sajous, from eight gentlemen.

There is no doubt that there are a large number who are anxious to further this enterprise financially, and who are only waiting for the initiative to be taken by others, and it is for this reason that we publish the foregoing list. The publisher, moreover, desires us to say that this money will be applied to nothing not the absolute expense of publication, and that such portion thereof as may remain unexpended at the end of the year will be returned *pro rata* to these special subscribers.

We shall publish the additions to this list as often as such occur, and respectfully re-

quest our contemporaries who are interested in this enterprise to further it by making mention of the foregoing and such other facts in connection as may arise from time to time.

SUBSCRIBERS TO SPECIAL INDEX MEDICUS FUND TO AUGUST 10TH.

Chas. E. Sajous, M.D., Paris, France	$25 00
John B. Roberts, M.D., Philadelphia	25 00
E. E. Montgomery, M.D., Philadelphia	25 00
F. W. Henkel, M.D., Buffalo	25 00
Melvin Dewey (New York State Library), Albany	25 00
Chas. O'Donovan, M.D., Baltimore	25 00
Chas. W. Fassette (*Medical Fortnightly*), St. Joseph, Mo.	25 00
D. W. Montgomery, M.D. (San Francisco Medical Society), San Francisco	25 00
S. W. Deland (Orleans Parish Medical Society), New Orleans, Louisiana	25 00
Total	$225 00

CONSTIPATION.

This complaint, which, after all is said, is a symptom rather than a malady, is of almost universal prevalence in the United States, where so little attention is paid to the more healthful forms of exercise or those athletics which tend to the perfection of the economy as a whole.

Sedentary life, more than any other one cause, is responsible for this condition. It is notorious that our people do not use their legs judiciously. The bicycle, the horse, the tram car, the railway—all the different modes of propulsion on land or water—are, from the standpoint of the hygienist, patronized to an inordinate degree, and tend to both favor and perpetuate this condition. As a result, Americans as a class are devoted to purgatives. In proportion to population, in no country is there such an universal sale of laxatives—mineral waters, aperient pills, anti-constipation granules, cathartic wafers, anti-bilious pastilles, purgative pellets, etc., etc., *ad nauseam.*

The table habits of the people likewise have much to do with constipation. First, those who indulge in malt and alcoholic liquors rarely do so upon a full stomach and at the termination of a meal, but employ these fluids as "teasers" and "whets" to the appetite, to be taken at any period from five to forty-five minutes before eating.—With many, that spirituous abomination "the cocktail" is deemed a necessity; it has been introduced as the forerunner of every banquet, having been brought from Scandinavia and Russia, where an excess of food is deemed an essential to the providing of fuel for the evolution of animal heat. Second, the food is, as a rule, badly cooked, imperfectly chewed, bolted, and rarely more than half-digested. As a result, the *primæ viæ* becomes overloaded—is clogged with a mass of material to no good end, and that continues to serve no purpose save decreasing the tonicity of the digestive tract.

More cases of constipation are traceable directly to such improper digestion, with the resultant concomitant of imperfect peristalsis, than to any other cause; and physicians, in treating these cases, too frequently commit the great error of prescribing cathartics, thereby securing to the patient temporary relief without in the least modifying the primary cause. Those familiar with the characteristics of Abernethy will recall his remark to a well known gourmand who was a constant patient: "You d—d fool, you fill your guts to repletion and then come to me to empty them." To be sure, by means of a cathartic the effete mass is swept out of the intestine, but this very effort tends to still further weaken an already impaired function.

Cascara Sagrada, which is perhaps one of the very best alteratives known to the materia medica, owes its reputation not to its alterative action, but to its auxiliary properties whereby it acts as an intestinal tonic—it strengthens muscular activity, stimulates secretion, and provokes peristalsis; yet this very drug has in many instances fallen into desuetude because it cannot *create* anew a function that has become practically obsolete; its patrons continue their pernicious habits and then wonder why the remedy upon which they have so long depended loses its activity except as its doses are increased or it is fortified by some agent more drastic.

What the average nineteenth-century American appears to need is a food that requires neither trituration nor digestion—that will be assimilated without even a shadow of physiological effort; nothing else will meet

the demand of a class possessed of vicious habits which they will not endeavor to remedy. The majority of individuals learn no lessons by experience, but treat their stomachs and digestive apparatus as if made of steel and practically unlimited in wear and tear and power of recovery from abuse; yet the most perfect steam-engine could not undergo a tithe of the ill treatment that these unfortunates accord to their digestive apparatus without it speedily being relegated to the scrap-pile. Dyspepsia, which has already become known as the "national disease," covers a multitude of sins, and has for its first evidence imperfect digestion and assimilation.

The new remedy, Taka-Diastase, which has been heralded as of especial value in those forms of indigestion resultant from abuse of amylotic foods, has unexpectedly developed a newer and more valuable power, viz., of correcting impaired functional activity arising from indiscretions of the table. Its use, within limits, insures within the intestinal canal that digestion which should be the concomitant of perfect health and habits. Thus it promises to be one of the most active remedies for those forms of constipation that result from vicious table habits.

It is an error to suppose that the greater part of digestion goes on within the stomach; the province of this organ is chiefly preparatory. Preparation having been made for action by the juices of the duodenum, the food passes the pyloric orifice, perhaps only to be disappointed with the results that accrue. An imperfectly digested, fermenting mass next obtains, that may remain stationary or latent, or be crowded on into the lesser intestine, there to be relieved of the greater portion of its fluids, and then become a focus of disturbance as an impacted, semi-dry, fermenting mass, with all the unfortunate sequelæ of absorption into the circulation of poisonous gases and ptomaine toxicity that are thus developed. In such instances Taka-Diastase takes up the work which has been accomplished but imperfectly in the duodenum, and by stimulating secretion and supplying its own fermentative energy accomplishes an act of superdigestion—it completes that which should have taken place elsewhere. This superdigestion reduces the nourishment to proper consistency without external aid, assures assimilation, and finally provokes peristalsis whereby the now fæcal mass is forced onward to an extra-intestinal existence; thus the condition of constipation that would otherwise have accrued is overcome, and the result attained is physiological rather than artificial.

As already stated, Taka-Diastase has exhibited remarkable results in this connection. In one instance a lady patient whose constipation was further complicated by dislocated kidneys, and who for three years had been unable to pass a single twenty-four hours without resort to an aperient, has secured perfect relief through Taka-Diastase. Another in like condition, and a sufferer for years from hæmorrhoids, and whose constipation was even more persistent, secured such relief as she never before had been able to attain. If space permitted, we might refer to half a score of males, business men, more or less sedentary in habits, who have found in Taka-Diastase a remedy that renders comfortable lives hitherto considered only tolerable at best.

Certain errors have been promulgated regarding this new ferment: one, that it is inactive in the presence of acids; and another, that it is destroyed by the presence of an alkali; consequently that it must be administered at a time when the reaction of the stomach is neutral.

A greater error could hardly have been conceived, and it is based upon the theory that the chemistry of the test tube and that of the stomach must necessarily be identical. The chemist declares that an alkali must always neutralize an acid, and cites the well known chemical corollary regarding the commingling of these two agents; but his theories are entirely upset by the fact that while artificial gastric juice in the test tube treated with bicarbonate of sodium is wholly neutralized, this alkali in the stomach, on the contrary, stimulates the flow of normal gastric juice and increases gastric activity; the same is true also of sodium chloride. Neither of these alkalies interferes with the action of Taka-Diastase, and the activity of the latter appears to be enhanced by the ingestion of fluids rich in malic acid. It has long been supposed, too, though without a shadow of authority, that digestion beyond the pylorus

was the antithesis of that in the stomach, and consequently alkaline. As has been before noted in these columns, however, the normal digestive process within the duodenum is absolutely and unmistakably acid; the normal secretion of the intestines is the same; and while there will be times, even in a state of health, when the intestinal tract will perhaps be practically neutral, it is positively never alkaline except under conditions that are foreign to well-being and contrary to the purposes of the economy.

Taka-Diastase, if administered prior to the ingestion of food, is never so satisfactory as when the stomach has first been stimulated with a moderate amount of fluid followed by more or less solid nourishment. In the constipation of dyspeptics and those of sedentary habits, this new medicament gives abundant evidence of being able to accomplish more with less tax upon functional activity than any agent hitherto known.

EDITORIAL NOTES.

"Wonders Never Cease!"

A charlatan in central Michigan exploits an "invaluable pill, for many years manufactured by a well known Indian doctor who, etc.," and that is "warranted to cure piles, dyspepsia, kidney and liver complaints, female weakness, etc.," and in connection therewith has made such a notable discovery in physiology that we feel in duty bound to lay it before the readers of THE MEDICAL AGE. He says:

> The gall of the liver is made from the impurity of the blood. This impurity is made daily for the digestives of the stomach and kidneys, the stomach takes the gastric juice of the gall to digest the food, and the kidney takes clear gall to digest the water, taking from that the cloride of lime. This cloride of lime is a slime that feeds the rectum to assist nature's calls; without it we are troubled with costiveness or constipated bowels; then the water is sweat into the bladder by the heat of the body, and if the kidney does not distill it, it would sweat into the bladder without being distilled, and that would cause an inflammation of the bladder, and would collect sediments of sand and gravel. Until recently the —— pills have only been sold in the private practice of their inventer and by his special agents. The pills are now so extensively and favorably known that the proprietor has been induced to manufacture them on a large scale and so offer them to the general public. . . . Warranted to carry off all the bilious matter through the urine organizations . . . (and) to cure any weakness or lameness in the small of the back through the line of the kidneys, and is far superior to any so-called Kidney Pad.

Green Hair.—

Those who recall the experience of Timothy Tittlebat in his endeavors to get rid of his carroty locks, undoubtedly regard the report of green hair as somewhat of a fiction. As a matter of fact such colored hirsute adornment frequently appears among those employed in copper works and copper mines, and Bartholin drew attention to this fact as far back as 1654. Recently a case was reported to the Johns Hopkins Medical Society by Doctor Oppenheimer, as occurring in a man aged fifty-eight who had been exposed in copper works to very fine copper oxide for four years; he was rather uncleanly in habits, and was likewise "suffering from vague gastric symptoms." The hair was a "pale but distinct green," the color being more marked on the head and the beard, though, curiously enough, it pertained to the same growth throughout the surface of the body; the coloring, moreover, was uniform.

Little Difference.—

Holloway, the arch quack, by some means upon one occasion thrust himself upon a company of gentlemen, and, presuming upon a slight acquaintance with Mr. George Augustus Sala, requested the latter to introduce him to the author of "Vanity Fair." Mr. Sala did not relish the office, but finally gave the desired introduction. Thackeray mistook the "Professor of Aloes" for a distinguished military man and complimented him accordingly, whereupon Holloway, taken aback, blurted out who and what he was. Thackeray merely answered: "Oh! well, I made a very natural mistake, for you too must have killed thousands of people."

Microbic Pathology.—

Even our Gallic friends are becoming dissatisfied, apparently, with the bacteria craze, for the *Journal de Médecine de Paris* recently declared there are "serious reasons for believing that adhesion to exclusive bacillary path-

ology does not obtain better results than clinical medicine in the great majority of cases, and, moreover, compromises the constitution of the patients."

If the number of "straws" that are borne upon the breeze are indicative of anything, it is that the microbe fad has not only seen its best days, but is rapidly waning.

Administration of Quinine.—

This alkaloid undoubtedly exercises its best effects in acid solution. But acid is sometimes a drawback to the exhibition of the drug in this form, while with many the intense bitterness that supervenes becomes a permanent objection. By obtaining the crystals in their entirety, or after they have been reduced to an impalpable powder, and enclosing in the convenient gelatin capsule, the drug obtains speedy release and solution in the stomach; solution will, moreover, be aided by the fluid imbibed in swallowing the capsule.

Nuclein in Gonorrhœa.—

Recently several instances have been reported to the editor of this journal wherein Nuclein has with unprecedented success been employed in this malady—a malady that generally is a *bete noire* to practitioners.

These statements are well substantiated but appear almost "too good to be true," and it is to be hoped that subsequent events will prove this evidence based on something more than coincidence. In the meantime further developments are eagerly awaited.

The Columbia Chemical Co. vs. "The Great Retired."—

In the legal controversy between these parties, the former scored a decided success, and the latter has been permanently enjoined from manufacturing "animal extracts." It is charged that, having sold his Columbia Chemical stock, and seeking to sell Sanitarium stock, the "Great Retired" endeavored to "do" the Chemical Company by depriving it of its rights of ownership in titles and extracts.

The Canadian Medical Association.—

This society, which is generally well attended by American physicians, will meet August 28th to 30th in Kingston, Ontario.

Items and News.

Hahnemannianism versus Regular.—

As to the doctrine of potentization, in view of the methods at present employed in the various Pasteur institutes and in the preparation of the antitoxins, it would seem that there is nothing very strange, and certainly nothing irrational, about it. . . . Granted even that this doctrine were rejected, it is a Hahnemannianism, not intrinsic in homœopathy, which, as its name expresses, has only to do with the principle guiding in the choice of a remedy.

As to "curious" homœopathic remedies, we grant that when it comes to advertising potentized moonshine we might hesitate to defend it, or might be willing to condemn it absolutely were it not that various "regular" physicians have demonstrated that of the solar light the red ray has the most beneficial effect upon the progress of smallpox. When reference is made to the preparations from the pustule of smallpox, we retort by pointing to the whole serum therapy over which there is at present so much jubilation, and we hardly know which to prefer, the domestic cimex of the homœopath or the testicular juice of the other side. If we have the polecat, they use musk. The number of such substances used has nothing to do with the relative absurdity or wisdom of their employment, for if the principle of their allowability be acknowledged, the greater their number the more praiseworthy the one introducing them.

Personally we think the time for pitting the medical schools against each other is past. "By their fruits ye shall know them." We are perfectly willing to leave the whole question to the practical horse-sense of the public. We find extremists on both sides—ultra spectral rays—who need not bother us, though their influence is felt. We do not advocate amalgamation, nor anything like it, but we do advocate a standpoint above that of either sect, a higher plane, upon which the elect of all schools may even now meet, but which will ever remain a *terra incognita*, an unthinkable No-Man's Land, with all bigots, rank and file.—*Hahnemannian Monthly.*

Butter vs. Margarine.—

The great drawback to all efforts to procure legislation for pure food comes from misguided though earnest advocates; and this is especially true in the contest that has been waged to secure control of the oleomargarine trade. Instead of facts and arguments, fictions and vilifications have been

used. The most extravagant and unaccountable statements have been published far and wide regarding the composition and digestive deportment of this innocent discovery of M. Mege-Mouries. I give here a sample of this campaign literature taken from the report of an address by a gentleman occupying a high position in the Elgin butter trade. He says of oleo:

"When eaten in quantities and with avidity as pure butter, it is insoluble by the digestive processes and remains a floating oleaginous mass in the stomach and bowels, to ferment and sour, and thus disturb the entire system, and to poison the blood with a lot of putrid matter."

Another gentleman recently asserted in the columns of an influential agricultural journal that he held in his possession a certificate from a competent chemist that coal-oil stearine was used as the backbone of oleo.

Pure butter has a delicacy and a flavor which oleomargarine can never hope to supply, and it has nothing to fear if allowed free and open competition with oleomargarine under its own name; it is a good illustration of the selection of food for flavor rather than nutritive powers.—A pound of good oleo may have as much (or more) nutritive value as one of good butter. Were I eating glycerids for their calorics alone, I would take the cheaper one; but we are willing to pay more for the butter because it has a more pleasant flavor. But far be it from me to prevent my brother from purchasing the cheaper food, if it be more befitting the exercise of his taste or the contents of his purse.—HARVEY W. WILEY, A.M., Ph.D., M.D., in *Food and Sanitation.*

How Notoriety is Secured.—

We learn from the *American Visitors' News and Register*, June 14th, 1895, that "Doctor Blank, the *distinguished* ophthalmic surgeon, of ———, U. S. A., is in London visiting the hospitals *in view* of demonstrating his improved operation for cataract."

At what London hospital has he given a demonstration? The paragraph continues:

"He is accompanied by his wife and son, and will leave for the Continent shortly. They will tour France, Germany, Scotland, Belgium, Austria, and England, *in the interest of science*, returning to America about October 1st."

This paragraph will injure Doctor Blank if he is a distinguished surgeon, and if he is not it will secure a certain degree of notoriety which may bring him clients.—*Provincial Medical Journal.*

The Amenities of Journalism.—

The "versatile" editor of *The Medical Mirror* recently cast a "reflection" on the few enterprising medical journals that insert engravings of the "female form divine," and claims that the practice is "an offense against all decency," etc. If this sentiment expresses the editor's dictates of conscience at the present time, what a miraculous transformation must have taken place since this Doctor posed beside a nude female figure in "The Triumph of Love o'er Science," a reproduction of which appears in a book sold to the public! Verily, "Consistency, thou art no fit companion for Love."—*North American Medical Review.*

Very Evident!—

A pudding is mostly, if we may be allowed to use an expression from petrology, a *breccia*—a compound formed of fragments of a material which had a previous independent existence, and bound together by a soft mortar or cement which is able to penetrate and fill the pores of and intervals between the lumps, and then become set by the culinary thermic process. It is by this that pudding becomes a unity and receives a kind of gustatory homogeneity, however numerous and diversified may be the substances introduced into its constitution.—DOCTOR THUDICUM, in *The Lancet.*

A Centenarian.—

William Chambers, a veteran of Waterloo, died at Dresden, Ontario, June 23d, at the advanced age of 108 years. A native of Ireland, he enlisted in the Enniskillen Dragoons in 1808. He had resided in Canada since 1830. He retained all of his faculties and much of his bodily vigor up to the last.—*Detroit Tribune.*

Lucky Man!—

Oscar Tully, of Yardville, New Jersey, suffered an operation for appendicitis when the obstruction was found to be a large pearl, which he must have swallowed in an oyster, and which he values at $200.—*Exchange.*

The Mississippi Valley Medical Association.—

This organization convenes for its next annual meeting in Detroit on September 3d, and the sessions will extend over four days. An unusually interesting meeting is promised.

Effete Europe.—

Bear in mind that the retrograde movement of medical science began in Europe, where all the other plagues originate.—*Brief.*

Book Reviews.

LITTELL'S LIVING AGE. Price, 20 cents; $8.00 a year. Littell & Co., Boston.

At this time, while other magazines are pressing their claims to the favor of the public, *Littell's Living Age* certainly should not be forgotten by those who know what its services have been in the spread of the best of periodical literature throughout the Continent. The four issues of the month of July have been extremely interesting, dealing with almost every range of literature — fiction, poetry, science, travel, geography, astronomy, etc. No better exhibit can be found of the progress and exposition of thought in the different fields of literature, politics and science than by an appeal to *Littell's Living Age*. Each volume is a mirror reflecting the leading literature of the months it covers. Considering the vast quantity and high quality of the contents of the yearly numbers, which form large octavo volumes of nearly nine hundred pages each, the price is extremely modest. The publishers, also, as an inducement to those who may desire to make a trial subscription, offer the twenty-six numbers forming the half-year ending with June, for $3.00. It is further offered, in consideration of $6.00 in payment for nine months, to send the thirteen numbers forming the first quarterly volume of the year, free.

OUTING. Price, 25 cents; $3.00 a year. The Outing Company, New York.

The August number opens with a strong, complete story, "In a Field of Buckwheat," by Jean Porter Rudd, in which the author admirably draws pen pictures of Alpine peasant life. Other notable features are: "The Cup Champions of 1895," and "Polo in the West." In comparing the crack yachts the author displays a thorough knowledge of his subject, and his comparisons are further explained by a series of diagrams and by a number of fine photos of the gallant "Defender" and the ambitious "Valkyre III." The polo article is profusely illustrated and contains much useful information on the progress of the dashing game in the prairie country.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

In the August issue appear: "A Singular Life," chapters XX–XXII, by Elizabeth Stuart Phelps; "Ebenezer Rockwood Hoar," by Darwin E. Ware; "An Architect's Vacation," by Robert Swain Peabody; "Godfrey's Cove," by John H. Ingham; "Life of a French 'Macon,'" by J. M. Ludlow; "A Talk Over Autographs," by George B. Hill; "Thrift," by L. Dougall; "Oases of Mars," by Percival Lowell; "President Polk's Diary," by James Schouler; "Like a Star," by James Herbert Morse; and "The Seats of the Mighty," chapters XIV–XV, by Gilbert Parker.

TRAVEL. Price, 10 cents; $1.00 a year. Travel Publishing Company, New York.

This is the former or old *Magazine of Travel* under a new title and with a new price. Instead of being $2 a year as it was formerly, it now enters the lists as a $1 magazine. It contains for July: "Jedburgh and Kelso," by Clinton Scollard; "Hunting from a Palace Car," by Abbie E. Marble; "Florentine Days," by Florence H. Morgan; "The Engineer," by J. P. Barnitz; "Life on a Lightship," by M. Crofton; and "From Ancient Inn to Modern Hotel," by Reverend C. H. W. Stocking.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 per year. Harry C. Jones, New York.

The contents of the August number are more attractive than ever, in the elaborate display of illustrative art as an ornamental accompaniment to a large number of interesting papers on a variety of subjects. We are sincerely appreciative of such artistic result, and for this reason would desire this beautiful monthly to be on the table of all our readers. We also note that the publication of a magazine purely literary in character has been undertaken by Mr. Jones, which latter fact alone ensures success.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. The J. B. Lippincott Co., Philadelphia.

The complete novel in the August issue is "Little Lady Lee," by Mrs. H. L. Cameron. "A Friend to the Devil," by Maurice Thompson, is an amusing story of Georgia superstitions; "Applied Art" is by W. T. Nichols; "The Romance of an Ox-team," by Chas. D. Roberts; "Two Prayers," by Kathleen Nelson; "The Bicycling Era," by J. G. Speed; "Caricature," by N. B. McCune; and "The Mystery of Sound," by W. M. Clemens.

THE PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 a year. Fowler & Wells Company, New York.

The August issue affords a portrait and description of the Hindu monk, Swami Vive Kananda, by Edgar C. Beall; Doctor Drayton deals with "The Scientific Relation, Past and

Present;" L. A. Vaught with "The Problem of Marriage." There are the usual departments devoted to Science of Health, Child Culture, etc.

McClure's Magazine. Price, 10 cents; $1.00 a year. S. S. McClure, Limited, New York.

The first of Anthony Hope's new series of Zenda stories appears in the August number. There is a new "Jungle" story by Kipling; a story by Stanley J. Weyman; and a California story by Bret Harte; "The Life of the Circus Performer" is by Cleveland Moffett; "Moltke's Manner of Carrying on War" is described by Archibald Forbes.

A Standard Dictionary of the English Language. Two-Volume Edition; pp. 2338. Half Russia, $15.00; full Russia (with index), $17.00; full Morocco (with index), $22.00 Funk & Wagnalls Company, New York, London, and Toronto.

This lexicon is constructed on original plans, designed to give, in complete and accurate statement, in the light of the most recent advances in knowledge, and in the readiest form for popular use, the orthography, pronunciation, meaning and etymology of all the words, and the meanings of idiomatic phrases in the speech and literature, of the English-speaking people. It embodies many new principles in lexicography and contains 5,000 illustrations made expressly for this work. It is said to contain 301,865 vocabulary terms, or about 75,000 more than any other dictionary of the language, and to have cost nearly a million dollars.

It is impossible in the space at command to give the detailed and comprehensive review which so vast an undertaking deserves. But it is a work which should be on the shelf of every lover of literature, every student of the English language, every inquirer after the meaning and significance of words.

The Aseptic Treatment of Wounds. By Doctor C. Schimmelbusch. Translated by Frank J. Thornbury, M.D. Cloth; 8vo; pp. 233. Price, $2.00. New York: G. P. Putnam's Sons.

This work certainly fills a place in medical literature hitherto unoccupied in America. To be sure, several little monographs have been put forth, but always without any evidence of originality or direct knowledge on the part of the authors, being at best but mere compilations where even sound judgment was more or less at fault. This work of Schimmelbusch, however, covers the entire ground in the most complete and thorough manner; even the minute details are thoroughly worked out, and the illustrations render valuable aid in elucidating the character of the text.

To those who have the fear of microbes constantly before their eyes this work will undoubtedly serve a most excellent purpose; and even those who do not uphold all the minuteness of detail in aseptic wound treatment will find much that will add greatly to the convenience of their work, even without going into the extremes of sterilization.

Syllabus of Eclectic Materia Medica and Therapeutics. By F. J. Locke, M.D., and H. W. Felter. Cloth; 12mo; pp. 461. Price, $2.50. J. M. Scudder's Sons, Cincinnati.

This is practically a compendium of the lectures delivered in the Cincinnati Medical Institute by Professor Locke, supplemented by new therapeutical matter, pharmacological notes, etc. It is by no means an epitome of either materia medica or therapeutics, however, nor is it intended to be. While the work is creditable in so far as it goes, we must deprecate the issuing of such, since the purpose is less the education of the student in medicine than the fitting of him for the final examination prior to graduation. It goes without saying, that our eclectic friends are not obliged to resort to such measures, and it is especially creditable to them that they are no way responsible for the origination of literature of this type.

A Freak in Finance. By J. F. Cargill. Paper; 12mo; pp. 142. Price, 25 cents. Rand, McNally & Co., Chicago.

This, number 202 of the "Globe Library," is a complete and thorough refutation of the heresies that are promulgated in the work known as Coin's Financial School. It takes up the very points which the latter work deliberately slurs over, or entirely ignores, in the presentation of financial problems, and is as a whole a very complete and succinct account of financial measures and their results during the last century, not only in the United States, but abroad. We wish this book could be placed in the hands of every man or youth throughout the country, inasmuch as it presents a complete solution of the problems that are now worrying the masses.

A Fiend Incarnate. By David Malcom. Cloth; long 32mo; gilt; pp. 213. Price, 75 cents. J. Selwin Tait & Sons, New York.

We are informed by the author that, though this is a work of fiction, the plot is founded on fact, and each character an actual portrait. While the real arch-conspirator, portrayed by

Pordenone, did not do everything narrated, the majority of the misdeeds cited are fairly chargeable to him, and he "actually did many other things more remarkable, but too improbable to be introduced into fiction." This exemplifies in some measure the claim of the late Doctor Charles Lever, who was wont to declare that truth was far stranger than fiction, and that what was most improbable in any work was apt to be the very portion founded on fact. The book holds the interest of the reader to the finish.

Sir Francis Bacon's Cipher Story. Volume V. Cloth; 8vo; pp. 200. Price, 75 cents. Howard Publishing Co., Detroit.

Another volume of Doctor Owen's translation of the Cipher Story is at hand. The whole theory, plan and process in the publication of these curious and perhaps marvellous volumes have been so thoroughly described that it seems useless to make further allusion thereto. This volume is a continuation of Bacon's life in France, perfecting the details of his parentage, etc., along with much other matter of historical moment.

A noteworthy fact in connection with this volume is that Doctor Owen never saw a line of it until it appeared in print. The translation was made from Doctor Owen's wheel by young ladies in the office.

The Annual of Eclectic Medicine and Surgery for 1894. Volume V. By John V. Stevens. Cloth; 8vo; pp. 383. Price, $3.20. John V. Stevens, Chicago.

This is a very complete epitome of advanced medical thought and experience from an eclectic standpoint. The work embraces under one cover the most meritorious papers read at the meetings of the various State societies, which are thus preserved and form a valuable reference library of the researches, observations and experiences of the ablest eclectic practitioners. A voluminous and carefully arranged index is a very valuable addition. The work is one that can be recommended to any and every practitioner, as it contains a great deal of material of most practical value.

Excessive Venery. By Joseph W. Howe, M.D. Cloth; 12mo; pp. 299. Price, $2.75. E. B. Treat, New York.

This volume contains the substance of a course of lectures originally delivered in the Medical Department of the University of New York. In addition to the results of personal experience obtained in hospital and private practice, the author has added the peculiar methods of the treatment employed by various authorities in Europe and America, thus making a complete work of reference for both the student and practitioner. Although the volume has been before the medical profession since 1887, it is perhaps the best of the books of its class, and certainly is devoid of many objectionable features that pertain to most.

Skiascopy. By Edward Jackson, A.M., M.D. Cloth; 8vo; pp. 112. Price, $1.00. The Edwards and Docker Co., Philadelphia.

This work was prepared in order to give more complete information regarding, and assist in the general adoption, of skiascopy as an essential part of the examination of ametropia. The claims made for this procedure are: that it is the most active objective test independent of the patient's intelligence, acuteness, or coöperation; that it requires little more time than the use of the refraction ophthalmoscope or the opthalmometer, and moreover gives better information; finally, that it lays before the surgeon the refraction in each particular part of the pupil as it is revealed by no other test.

Thoughts on Religion. By George John Romanes, M.A., LL.D., F.R.S. Edited by Charles Gore, M.A. Cloth; 16mo; pp. 195. Price, $1.25. The Open Court Publishing Co., Chicago.

The book will create a sensation, for it shows that Professor Romanes was possessed of an eagerness to believe, but was still unable to overcome the objections made by science to religion. The volume consequently is an evidence of the importance of the religious problem. Canon Charles Gore, of Westminster, publishes these notes in connection with his own editorial comments.

De l'Agrandissement Momentané du Bassin. By Adolphe Pinard. Paper; 8vo; pp. 59. G. Steinheil, Paris, France.

The author of this brochure briefly sets forth the anatomy and physiology of the sacro-iliac articulations before and after symphysiotomy, the advantages of the operation, its technique, etc.

Handbook of Diseases of the Eye. By Doctor A. Eugen Fick.

This most complete, thorough, and compact of text-books has been translated by Doctor Albert B. Hall, of Chicago, and will speedily appear from the press of P. Blakiston, Son & Co. Among its other merits it contains a number of very handsome and practical colored illustrations that will greatly aid the student and be of much service to the practitioner. The price will be $3 to $4.

Therapeutic Brevities.

The Heart and the Bicycle-rider.—Grave injuries are done to male or female by the bicycle, especially through the heart. Doctor Kolb and myself have found that as soon as brisk cycling has commenced, the motions of the heart begin to increase. In this respect cycling differs from many other exercises. Rowing tells most on the breathing organs; dumb bells and other exercises where the muscles are moved without progression of the body, tell most on the muscles; whilst in climbing and long pedestrian feats it is the nervous system that is most given to suffer. There is not a cycle-rider of any age in whom the heart is not influenced so as to do more work, and although in skilled and trained cyclists a certain balance is set up which equalizes the motion, such riders are not exempt from danger. I have known the beats of the heart to rise from eighty to two hundred in the minute, in the first exercise of riding, an increase which, for the time, more than doubles the amount of work done—a very serious fact when we remember that the extreme natural motion of the heart allows it to perform a task equal to raising not less than one hundred and twenty-two foot-tons in the course of twenty-four hours—that is to say, over five foot-tons an hour. In the young the heart is undergoing its development, and is an organ which cannot without danger be whipped on beyond its natural pace. What occurs with it under such circumstances is that it grows larger than it ought to grow, that it works out of harmony with the rest of the body, and is then most easily agitated by influences and impressions acting upon it through the mind. I have many times seen this truth illustrated too plainly, and I doubt whether in the young, after extreme exercise, such as that which arises from a prolonged race, the heart ever comes down to its natural beat in a period of less than three days devoted to repose. —Sir Benjamin Ward Richardson, in *North American Review.*

New Preparation of Cannabis.—R. Cowan Lees, of Glasgow, has had excellent results from the use of a strong aqueous extract of the flowering tops of the female plant, of the usual strength of liquid extracts. It possesses the anodyne and soporific action generally ascribed to the resinous extract, although in a modified degree; has the characteristic odor of hemp, and a beautiful deep-amber color; is miscible with water, and hence there is no difficulty in combining it with other liquids.

Liquor cannabis Indicæ, in his experience, gives all the beneficial effects, without the drawbacks, of the tincture, avoiding those extreme exhilarating conditions bordering on intoxication which are sometimes met with even when using a medium dose of the latter. It does not seem to interfere with the secretion of mucus from the bronchial glands—a circumstance which renders it superior to opium in cases suitable for its use—whilst in pulmonary affections generally it acts most favorably as a soporific and anodyne. He speaks very highly of its effect in phthisis, where it relieves the cough and stimulates and exhilarates the patient; also in indigestion and constipation. The dose commonly used is one-half fluidrachm (two grammes) for an adult, though it may be increased to a full drachm.—*British Medical Journal.*

Fruit in Dysentery.—I desire to draw attention to the value of certain sorts of fresh fruit in chronic dysentery. Personal and professional experience shows that such are of the greatest value. I may specify strawberries, grapes, figs, and, if they can be so classed, tomatoes, these being all seed-fruits as distinguished from stone-fruits—of course they must be in absolutely good condition. For some years past I have made use of these largely in treating chronic dysentery and diarrhœa, with most happy results. The idea is not original, but was impressed on me by the late Doctor Sausmarez Lacy, of the Island of Guernsey, who, I believe, had practiced this treatment for many years. — Doctor Arthur DeButts, in *The Lancet* (London).

***

I have had fair experience with dysentery abroad, and when an acute case in a patient apparently otherwise healthy comes under my care, and threatens to become chronic, I look for malarial or scorbutic complication. Quinine in the one instance, or lime-juice with fresh fruits or vegetables in the other, quickly alleviates the symptoms. I believe most cases of chronic dysentery are, to a great extent, due to malaria or scurvy when contracted abroad. — Doctor J. S. McCutchan, in *British Medical Journal.*

Alkalinity of Urine.—Alkaline urine is rendered acid by inhalations of amyl nitrite. As such urine generally presents an excess of phosphates (when the alkalinity is not caused by fermentation in the bladder, by pus, or by

catarrh of the urinary organs), it is pretty evident there is some disease of the nerve centres; hence, turning by the inhalation shows that the acid change is owing, most probably, to vaso-dilator influences, because this medicament has a powerful stimulating influence on centres which promote vaso-dilator influences, or bring such about. The effect is mostly on the arterioles and capillaries, whose walls relax and admit much larger quantities of blood, thus making the vascular areas hyperæmic. The influence is on the basilar brain and cord; the muscles are therefore largely supplied with blood, and their nutrition increased. Uric acid is also passed in large quantities under this stimulus.—Doctor Joseph Adolphus, in *American Medical Journal.*

Abortion of Gonorrhœa.—Guiard's method of frequently washing out the urethra with weak solutions of potassium permanganate is certainly the most effective way to abort gonorrhœa. It requires a vessel of a capacity of about two imperial pints for holding the solution; attached to this is a rubber tube six feet in length, fitted with a glass cannula and tap, so arranged as to be controlled by the same hand that holds the nozzle in the penis. If the inflammation is confined to the anterior urethra, only one or two drachms are allowed to flow in, and then immediately voided. About half a pint is the utmost that should be used at one sitting. The best results are obtained with weak solutions—for example, 1 to 10,000, the maximum being 1 to 5,000. There should be two irrigations on the first, second, and fourth days. On the third and last four days of the eight days' treatment, only a single washing-out is advised. The results obtained are very satisfactory. The stains produced by the permanganate solution may be removed by a twenty-per-cent. solution of soda-bisulphide. —*Charlotte Medical Journal.*

Lubricants in Gynæcology. — A lubricant should be aseptic and non-irritating, and glycerin is undoubtedly the best base, but a superior quality is essential. Dudley employs a glycerin lubricant kept in metallic tubes like those which envelop oil colors.—The tube is essential, as an open jar of lubricant allows the compound itself to be contaminated by the unclean finger of a careless operator. Dudley's compound consists of glycerin, starch, powdered tragacanth, boric acid, and oil of wintergreen. The finger or instrument upon which this is applied should be dry, else it does not adhere well. It is a perfect lubricant, non-irritant, antiseptic, and deodorant, not greasy, and readily washed off; even after digital examination of extremely foul and fœtid malignant ulcerations, the odor (usually so persistent) may be removed by placing the hand under a stream of water. By its cleansing and healing effects it counteracts any tendency to chapping of the hands, a serious disadvantage in large private and out-patient practice.—*Homœopathic News.*

Chlorosis. — Carl van Noorden remarks: "Most chlorotic girls feel weakest and most worn out during the hours of the forenoon. The best remedy is the English fashion of a good hearty meal at the beginning of the day." He advises chlorotic girls to drink half a liter of milk of the best quality while still in bed, and to do it very slowly, taking fifteen minutes to ingest the quantity prescribed; half an hour later to rise and be rubbed with a dry, rough woolen towel. Then breakfast—a small cup of tea, one or two slices of buttered toast, and plenty of meat; two hours and a half later some bread and butter, together with two eggs, followed by a quarter of a liter of milk. A glass of sherry is now permissible if special reasons warrant it. The morning regulation of diet makes the forenoon hours quite comfortable. Fixed rules for other meals are of less importance.—*Medical and Surgical Reporter.*

Nuclein in Tuberculosis.—Doctor F. W. Garber cites ten cases of tuberculosis, one of neurasthenia, one of follicular tonsillitis, and one of troublesome sinus with phlegmonous cellulitis induced by a sloughing tendon leading from the second finger high into the palm of the hand, all benefited by Vaughan's Nuclein. He concludes it is of value in incipient tuberculosis; whether positively curative or not he is yet in no position to say, but believes by its early use it is possible to give patients a longer lease of life and very much more comfort. If the patient be in position to take advantage of favorable climatic conditions, he has great faith in the complete restoration to health by the use of Nuclein of a large number of persons now dying under other treatment.—*Medical and Surgical Reporter.*

Grape-fruit as a Tonic.—The Shaddock is an admirable tonic, as well as a most appetizing breakfast or luncheon relish. The sharp stimulus of fruit is one of the best

things to set the digestive organs in order for the day, and the peculiar properties of this fruit give it marked medicinal value. When eaten at luncheon it is prepared in a different way than for breakfast. For the second meal the contents of two halves should be scraped out, the seeds and tough cone of dividing skin taken out, and the pulp and juice thus obtained used to fill one of the halves, which it will just about do. A tablespoonful of sugar and one of rum, claret, or sherry, mixed with the juicy pulp add the perfecting flavor. At breakfast, with the long, pointed orange-spoon, it is eaten the same as an orange, and very little sugar is used, many persons preferring none, on the ground that its full medicinal value is better obtained without.—*New York Medical Times.*

Treatment of Buboes.—Open the gland at the point where fluctuation is most apparent, by the smallest possible incision, pressing out the pus, and inject the cavity with a two-per-cent. solution of silver nitrate; then dress with iodoform gauze.—The injections should be repeated so long as pus is formed. Healing commonly takes from one to two weeks, and the advantage of the method is found in the fact that almost no appreciable scar is left. This method is especially recommended where the pus is situated centrally in a single mass, but cases of disseminated suppuration demand radical extirpation. Success depends upon the disinfecting power of the silver nitrate and of the albuminate and chloride of silver formed in the tissues.—*Internationale Klinische Rundschau.*

Phthisis Pulmonalis.—Carasso especially recommends Peppermint oil in conjunction with Creosote in pulmonary tuberculosis. He orders taken every three hours during the day:

℞ Peppermint oil (pure), 2 Gm.
Alcohol, 125 Gm.
Glycerin, 62.5 Gm.
Chloroform, 5 Gm.
Beechwood creosote (pure), 2 Gm.
Shake before using.

He also demands persistent inhalation, day and night, of the vapor of Peppermint oil, by means of a respirator composed of a fold of lint—moistened anew every three or four hours with three or four drops.—*Il Faro Medico.*

Emol.—In Scotland is found a substance closely allied to fuller's earth, known by the name of Emol, that contains silica, alumina, lime and iron in small quantities, its chief constituent however being steatite. It immediately softens hard water when added to it, and has an excellent effect upon hard and horny hands when used with soft water, softening, healing, and cleansing them.

This observation has led to the use of the agent in keratosis, eczema, and other conditions where disease is due to an altered or thickened condition of the skin of the hands and feet. The results have been satisfactory in the extreme. It softens all hardened tissues, removes redundant tissue, and promotes a normal and healthy appearance.—*Medical Times.*

Potassium Bichromate.—This drug has a specific effect upon catarrh of the bronchi, both in the acute and chronic forms, and will be found of great benefit in catarrhal conditions of any of the mucous membranes. In gastric catarrh it acts admirably, especially if tenderness on pressure over the epigastrium is a marked symptom. In chronic gastric ulcer great confidence may be placed in it; a very small dose, from one-sixteenth to one-twelfth of a grain, given upon an empty stomach, will answer the purpose. This agent will well repay careful investigation, and is without doubt a most useful remedy.—*The Eclectic.*

For Asthma.—

℞ Chloroform, 1 drachm.
Ether, 1½ drachms.
Syrup acacia, 4 drachms.
Tinct. cardamom comp., 1 drachm.

A teaspoonful every half-hour until relief is obtained.

Ammonium iodide, 2 drachms.
Fl. ext. grindelia robusta, 30 minims.
Tinct. lobelia, ½ drachm.
Tinct. belladonna, 1 drachm.
Syrup wild cherry bark, 1 drachm.
Water, to make 2 ounces.

Teaspoonful three times daily.

—*Medical Review.*

Duboisine as an Anti-fat.—In the administration of Duboisine, either by the mouth or hypodermatically for the purpose of observing its specific effects upon the various organs of the body and their functions, it has been observed that, for whatever purpose, or however administered, it induces emaciation. It is a sedative to the nervous system, and diminishes all excretion. It has an undesirable effect upon the stomach when taken for a long time. But the persistent and almost invariable loss of flesh suggests that in those conditions where adiposis must be reduced, this agent may be valuable.—*Medical Press.*

Good Hints.—If a child has fever of any kind, or bowel trouble, always offer it water before giving milk or offering the breast.—A child often takes milk which its stomach repels, because it is thirsty:

If the sick-room is hot, the temperature can be lowered several degrees by hanging up sheets which have been wrung out of cold water, and repeating when dry:

The mouth and teeth should be washed two or three times daily with salt and water when there is fever, and the lips anointed with vaselin to prevent cracking.—V. E. LAWRENCE, in *Medical Brief.*

Locomotor Ataxia.—It is vital that the affection be treated in its incipiency, and to that end I would direct attention to the earliest symptoms, namely: Isolated paralysis of the external eye muscles; the occurrence of the Argyl-Robertson pupil; the appearance of optic atrophy with inequality of the pupils; vertigo and staggering; and, as sometimes coincident with these and most frequently closely following them, gastric crises or paroxysmal vomiting; lancinating pains in lower extremities, and absence of the patellar tendon reflex.—DOCTOR REBER, in *Lehigh Valley Medical Magazine.*

Application of Leeches.—The application of leeches to the temple is often of great service in relieving pain and subduing inflammation in the eyes and their appendages. The leech is best applied by putting it in a large test tube partly filled with water. When this is tilted so that its open end and the mouth of the animal come in contact with the skin of the temple, the leech feels so much at home in his native element that he promptly bites the skin when he touches it, and sucks himself full of blood.—*Universal Medical Journal.*

The Murphy Button.—Doctor John A. Wyeth, before the Tri-State Medical Association, expressed the opinion that the safest method for intestinal anastomosis is to be found in the Czerny-Lembert silk suture. The main objections to the Murphy button he finds in the small calibre of the lumen of the bowel at the point of union, the weight of the button pressing on contiguous tissues, and the liability of obstruction from plugging.—*Pittsburg Medical Review.*

Treatment of Goitre by Thyroid.—Professor Bruns has just published the result of his treatment of twelve persons affected with goitre by ingestion of Thyroid. Of the total number, nine were either cured or considerably relieved. Four children between the ages of four and twelve were also completely relieved; in a fifth case the goitre was accompanied by a cyst, and while the former was removed the cyst remained unaffected.—*Medical Record.*

Taka-Diastase in Diabetes.—Lépine records the result of the treatment of four cases of diabetes mellitus with a ferment prepared from malt. In all there was distinct improvement. The excretion of sugar averaged in each about 140 grammes every twenty-four hours, but under the use of Taka-Diastase the average was reduced to 70 grammes. Taka-Diastase is not diuretic; it has no injurious effects, but the improvement is only temporary.—*Medical Week.*

Vesical Irritability.—Doctor Schun declares that when irritation of bladder arises from excess of phosphates in the urine, the following alleviates the frequent desire to urinate:

℞ Benzoic acid, 8.00 gramme.
Borax, 7.50 gramme.
Water, 225.000 gramme.

—*Le Scalpel.*

Localized Meningitis.—Place a small cantharidal blister (one inch square) upon the point of greatest pain, and keep the resultant sore active by the compound resin-cerate for three or four days. Occasionally a second blistering is necessary, but no internal medication is required.—DOCTOR BURR, in *Philadelphia Polyclinic.*

Varicella.—In adults, in many instances, this malady is more likely to be overlooked than in a child, because the general symptoms of malaise are not so prominent. Adults will, in most instances, go about their daily work, and only occasionally is the temperature found to be high.—DOCTOR CANTRELL.

Obstinate Tonsillitis.—Sodium salicylate should not be overlooked in treating obstinate attacks of tonsillitis, as some rheumatic element is possible.—*Gaillard's Medical Journal.*

Vomiting of Pregnancy.—The latest remedy is a twenty-per-cent. solution of Menthol in olive oil. The dose is ten drops on sugar when the nausea appears.—*Journal of Medicine and Science.*

Medical Progress.

On the Frequency of Movable Kidney.—I have read with much interest the successive records of the operative treatment of movable kidney. That the condition is frequently overlooked I infer from the fact that several of my cases had sought advice repeatedly for the associated symptoms and had been treated for intestinal or nervous disorders. I can call to mind seven cases of movable kidney, of which one only had been previously recognized. Of the seven cases, one was a male, the remainder female patients. The male patient was thirty-three years of age. He was a keen otter-hunter and had been subject to frequent and prolonged immersion in water, and had also done a good deal of rough pony-riding. The symptoms were mental depression and languor, flatulence, and tendency to diarrhœa. The urine contained a small quantity of albumen, varying from one-sixtieth to one-twenty fifth. The left kidney descended considerably below its normal position, and slid away in the characteristic manner when the lower end was compressed between the fingers of the two hands. The question naturally arose as to whether this was a case of incipient Bright's disease or of mechanically produced albuminuria. An eminent London authority on renal (and many other) diseases decided in favor of the second alternative, and advised the continuance of the pad and belt which the patient was wearing. The symptoms generally improved; albumen was frequently absent from the urine, and the patient was mentally relieved by the knowledge that the indefinite symptoms were due to a mechanical condition and not to some mysterious disease. It is now three years and a half since I first saw him, and I gather from his letters that the mental and bodily conditions are both more satisfactory now than then.

My first female case was an ayah traveling in Europe. She was seized with renal colic, and the attack was followed by a copious discharge of gravel. She had had one or two similar attacks previously, and the kidney was very movable. I attributed the accumulation of gravel and consequent colic to dislocation of the kidney. A pad was applied, but I have no further record of the patient.

I met with another case in a young lady traveling with a trusted maid as companion. The maid had been instructed to pay as little attention as possible to the complaints of the young lady. The latter called on me one day complaining of pain in the right iliac region. She had a history of recent gastric catarrh. I examined the abdomen, thinking there might be some chronic perityphlitis, but instead of this I found a movable right kidney. I explained the state of things, and here again the knowledge of a mechanical cause for the train of symptoms was a source of great relief to the patient.

Recently I have met with two cases of movable kidney, both in young women, and both associated with localized pain, neuralgia, and derangement of bowels. One patient has a strong family history of malignant disease, and was much relieved when I explained the cause of her symptoms. The second had vague ideas of incipient something, and was glad to know that even if the symptoms were progressive there was a fairly certain means of permanent cure.

The following considerations seem to me worthy of attention:

That though the individual symptoms—namely, localized pain, mental depression, neuralgia, and intestinal irregularity — are indefinite, yet when associated they form a fairly characteristic clinical picture:

That the pain is often not in the kidney itself, but in the structures irritated by its abnormal mobility, of which the genito-crural nerve appears to be an important one, and may possibly be the afferent tract where reflex neuralgia is a prominent symptom:

All my female cases (possibly excepting the ayah) were nulliparous women, and I have been unable to trace any causal relationship with tight lacing; on the other hand, four of the cases occurred in patients who had indulged in violent exercise, such as running down the Righi to Viznau, donkey-riding, pony-riding, and pedestrianism generally:

What treatment short of operative interference is likely to lead to permanent relief or cure? The prospect of wearing a pad indefinitely is not satisfactory; to forbid exercise is paving the way to troubles innumerable; and to treat symptoms is to beg the question of treatment altogether. Recently I have prescribed exercises with a view to strengthening the lumbar and abdominal muscles, together with a liberal diet and appropriate treatment of the digestive organs. —Stuart Tidey, in *British Medical Journal.*

Cemeteries and Typhoid.—Whether a burial ground shall or shall not be a danger to the health of the surrounding population depends on a number of conditions and circumstances—some of which may not be easily determined in any particular place, and others may change in course of time. When inter-

ments are carried out with proper care, and the ground is covered with grass and trees, there is no danger to be apprehended from emanations; even in the ground air the predominant gas is carbonic acid. The chief danger consists in the probable contamination of the ground water and water supply, and this is directly connected with the nature of the soil as regards its permeability to air and water, and its richness or otherwise in the bacteria of nitrification. In light, sandy loams decomposition and the resolution of the corpse into salts and gases proceeds so rapidly that almost every trace of the soft parts is gone in a dozen years or less, with little or no offense; while, on the other hand, in a cold, stiff clay, a putrid, stinking mass remains for fifty years or more, and in a *dead* earth, such as one meets with in the heart of cities, there is no decomposition at all; in St. Andrew's (Holborn) churchyard, bodies buried two hundred years ago were found "sandwiched" between the crushed coffins, little more disintegrated than those buried just before the graveyard was closed twenty years before the excavations. In clay soils, seams of sand act as drains, carrying the soakage from the graves to the nearest water-course, and especially when the cemetery is on a hillside; and deep interment, far from reducing the danger, greatly intensifies it by removing the corpse beyond the nitrifying influence of the bacteria. Doctor F. Levison, of Copenhagen, has recently called attention to the recurrence of epidemics of enteric fever in a particular quarter of Copenhagen where the houses abut on the only partially covered outfall sewer, which receives with other sewage the drainage from a large cemetery. The severest by far of these epidemics broke out in 1880, when during some works the sewage—having been dammed back—left a semi-dried and most offensive deposit; the next heaviest occurred in 1884. Flügge has called special attention to the relation between the sand seams—or land springs, as they are called in this country—and wells; and Levison considers that only forty-five of the six hundred and fifty cemeteries in Denmark are objectionably situated, while of those around London we doubt if there are three.—*Sanitary Record.*

Duodenal Cancer.—Primary cancer of the duodenum, like primary cancer of the intestinal tract generally, has, in the large majority of cases, an annular form, and thus most frequently produces stenosis; the stenotic symptoms vary according to the level at which the growth occurs. In *cancer sus-vaterien* (*para-pylorique*) the formation develops in the first portion of the duodenum, and presents a symptomatology almost identical with that of pyloric cancer. In *cancer sous-vaterien* (*præ-jejunale*), besides the symptoms accompanying stenosis of the pylorus, there are signs indicating a reflux of bile and pancreatic juice into the stomach. In *cancer peri-vaterien* the symptoms approach more or less to one or the other of the above forms.

Among the *cancers peri-ampullaires* the author groups not only the cancers of the duodenum which affect the ampulla of Vater, but those also which are situated in the neighborhood, and those which in their development involve the ampulla. Some of these cannot be distinguished clinically from the ordinary examples of duodenal cancer, but some may be distinguished by evidences resembling pancreatic carcinoma.

Pathologically, these growths usually present narrowing or contraction of the gut at the level of the cancer, with dilatation above it, sometimes involving the stomach itself, and frequently accompanied by insufficiency of the pyloric valve. Histologically, there appear to be as many varieties of cancer of the duodenum as there are different kinds of cells entering into the formation of this segment of the digestive tract.

In diagnosis the difficulty varies according to the position of the new-growth. In the form immediately beyond the pylorus it is usually impossible, but in the other situations it is sometimes possible. Primary duodenal cancer has to be differentiated from supra-duodenal, or pyloric, and infra-duodenal stenosis, and those conditions of constriction dependent on extrinsic causes, such as compression by surrounding structures.

The topographical diagnosis is of the greatest importance from the point of view of operative interference, which differs according to the seat of the growth in the duodenum. But when the diagnosis is impossible, exploratory laparotomy constitutes the first measure necessary for surgical intervention, which, however, in the greater number of instances cannot be more than palliative.—Adrien Pic, in *Revue de Médecine.*

Concerning Hospital Syphilitics Discharged.—Professor E. Lesser, of Berne (Switzerland), provides every one of his syphilitic patients, when discharged, with a card containing the following:

You are suffering from a venereal disease (syphilis)

Your disease is INFECTIOUS.—It will remain infectious for several years to come.

Consequently, you must be ever careful of yourself, in order to prevent transmitting your disease to others, through kissing or other close contact, through sleeping in one bed with others, through using food and drink utensils in common with others.

Your disease cannot be cured by a single course of treatment.

Probably, after awhile, you will again experience some manifestations of your disease (for instance, sores or pain about your mouth, or throat, or genitals, or some eruptions on the body).

As soon as you have noticed such symptoms, you must, WITHOUT ANY DELAY, place yourself under medical care—be this at a hospital or at your home.

Even in the absence of any visible symptoms, you must, about every four months, apply to a doctor for examination and, possibly, a course of treatment.

Such courses of treatment do not necessarily require sojourn at a hospital, so that, probably, you will be able to attend to your occupations as usual.

Only when you have been undergoing an appropriate course of treatment several times yearly for about three years—only then you will, probably, escape certain later serious manifestations of your disease (for instance, caries, early cerebral apoplexy).

YOU CANNOT MARRY BEFORE THE LAPSE OF FOUR OR FIVE YEARS AFTER THE INFECTION, since otherwise you would transmit your disease to your wife (husband) and children. You cannot marry without medical permission.

Under due treatment your disease is very well curable (*sehr wohl heilbar*).

Keep the card carefully, and show it to every doctor you will consult.

Do not show the card to anybody else.

—*Correspondenz-Blatt für Schweizer Aerzte.*

The Juices of the Stomach.—Doctor Frémont, of Vichy, has recently been conducting experiments on dogs with a view to determining the properties of the various juices secreted by the stomach. He establishes continuity between the œsophagus and the duodenum, and, as soon as the adventitious channel is in working order, applies ligatures round the cardiac and pyloric orifices of the stomach, with which a fistulous communication can now be made from the outside. The animals support this in a surprisingly nonchalant way, and M. Frémont was consequently able to carry out direct observations regarding the mode of action of several medicaments, as well as on the digestibility of various articles of food. For instance, he was able to show that bicarbonate of soda excites the pouring forth of the gastric juice; subnitrate of bismuth has the effect of diminishing all the secretions in quantity; a milk regimen serves to lessen the amount of watery exudation; finally, these animals tolerated a two-per-thousand solution of muriatic acid.

These dogs ate and drank more frequently than formerly, but in other respects were apparently quite unaffected by the isolation of the stomach. Thirst, hunger, and even vomiting, seemed to be entirely uninfluenced by the treatment to which the gastric viscus was subjected.

It certainly is a remarkable fact that in its isolated state the stomach should continue to live, feel, secrete, and absorb in its customary way. It digests albuminized substances introduced into its cavity, but does not modify fæcula.—*Provincial Medical Journal.*

Perils of Acrobatism.—Clowns and contortionists are not a long-lived class. Not only do they strain nature unduly in the exercise of their avocations, but, as a rule, they also demand too much from their digestive and excretory organs in the matter of alcohol. Professor Quenu recently relieved a clown of two aneurysms by extirpation, one being situated on the right iliac artery and the other on the left femoral. In the first case the external iliac artery had to be tied above the tumor as a preliminary measure, as well as the profunda, the muscular, and the circumflex iliac below; in the second, not only were the same vessels ligated both above and below, but the femoral vein was also resected for a considerable portion of its course. The clown recovered, but had to abandon acrobatism.—*Provincial Medical Journal.*

Ptomaine in the Urine of Cancerous Patients.—Griffith, before the Parisian Academy of Medicine, described a ptomaine extracted from the urine of a cancerous patient—a white substance, which crystallizes in needles, and dissolves in water with an alkaline reaction; it gives a brown reaction to Wessler's reagent; moreover, it is highly poisonous, and injected into the veins leads to fever and death in about three hours. It is not present in normal urine.—*British Medical Journal.*

Mumps.—The incubation period varies from eighteen to twenty-two days, and the malady is especially contagious during this period but is also contagious after convalescence, the exact length of time, however, not having yet been determined. Frequently the disease begins with tumefaction of the submaxillary glands and a severe angina. Metastatic orchitis sometimes begins with an epididymitis.—*Le Courrier Médical.*

The Medical Age.

VOL. XIII. DETROIT, AUGUST 26th, 1895. No. 16.

Original Articles.

THE MONROE DOCTRINE APPLIED TO THE PHYSICIAN.

BY ORVILLE W. OWEN, M.D.*

Is it not about time for the medical profession to insist that the fundamental principle of non-interference by Europe should be incorporated in our medical journals, when from fifty to sixty per cent. of published articles are taken from European sources—when inventions and discoveries made by American physicians are either passed by or slightly noticed, until some foreigner republishes them as his own; when American graduates are treated with undeserved contempt, until a course has been taken in Germany or France? Is it not time to call a halt, and force recognition of our own merits?

If the medical profession of this great country is so poor in mental endowments that editors must look for articles in European centres, let us find it out. But that of all the professions ours should be the one that has not advanced, is as untenable as any other fiction.

America has advanced in one century as far as Europe in ten centuries; within our borders mental growth has kept pace with natural progression, and to-day our country and our people stand before the world as the brightest types of inventive skill and educational growth. But if we as a profession are the one exception to the rule of progression, then shut us out, build a wall around our pitiable brains, and let us vegetate, "unknown, unhonored, and unsung." Tear from our hearts and brains the names of those that have raised our profession to the zenith; cast out our heroes; wash from the slate the names of our MacDowells, Batteys, Simses; raze from our escutcheons the Hamiltons, Senns, Shurlys, and men of that ilk; send into oblivion the Mitchells, Elliots, Thomases, and the host of other American physicians famous in their day and age. If I write strongly upon this subject, it is because I think strongly. There is no wish upon my part to deny the great work accomplished by foreign physicians—far from it; let us give them all due credit for their discoveries in the realm of medicine and surgery, but not one iota more.

That our editors *do* discriminate is easy of demonstration. I counted the articles, excerpts, and reviews in a leading American journal for the first five months of 1894, and the following was the result: Germany was credited with 105, Belgium with 1, Russia 1, France 61, England and her provinces 37, Italy 2, South America 1, United States 61; total, 269. From European sources, 207; from the United States, 61; balance in favor of Europe, 146.

A case or two showing the injustice done our physicians may not come amiss. An eminent laryngologist of Detroit published an article some time ago in an Eastern journal, which was translated and republished in a Parisian journal, and in the meantime our erudite American editors passed the original by without notice. But, behold! when retranslated from the French, our faddists scattered it broadcast east, west, north, and south. The writer first published the carbohydrate treatment for uric-acid diathesis, in the *Detroit Clinic*. One single American editor republished it and its forty-nine reported cases. Some two years later a German physician published as his own in a Berlin journal this same treatment, even to the exhibition of magnesia sulphate, but gave no credit to America or Americans; he knew us and our craze for foreign articles too well; and he was not disappointed, for his article

*Decipherer of Sir Francis Bacon's Cipher Stories.

was translated into English and published over and over again in American journals, and to-day the non-nitrogenous diet for the treatment of uric-acid diathesis is accredited to a German, instead of to an American.

The iodine-and-gold treatment for phthisis has just been exploited in Berlin without a single reference to its two American originators, Doctors Shurly and Gibbes. Soon we will see this article translated and re-published in American journals, and credit given to Germany for the discovery.

The inutility of carbolic acid as a germicide was first pointed out in Detroit in a paper read before the Detroit Medical and Library Association. A year later the same fact was noted in Germany by the great Billroth, who received the honor, if there was any, of the discovery.

One could go on citing case after case, *ad infinitum*, invention after invention, discovery after discovery, accredited to European sources, yet each and every one primarily given to the profession by our own people. But, alas! until the seal of Germany, France or England has been affixed, our editors pass them by as unworthy of notice. The time, however, is approaching when the rank and file of American practitioners will marshal under the Monroe-doctrine banner, and force the medical journals of this great country to take the same stand for the profession as the public press takes in matters political. Woe to the statesman who recedes a step from the old doctrine; such a storm from editorial pens breaks o'er his head, that the in-rushing tidal wave of public opinion buries him deep in a political grave. All hail to the time when our medical journals will take the same stand; then, and not till then, will the faddism that to-day is rampant fall into oblivion; then will the Nestors of the medical profession in these United States take the high position that belongs to them by right; then will the journal that first inaugurates this new order of fair play become preëminent, and its editor earn and enjoy the praise and honor of the whole profession.

There is an easy and safe remedy for this growing evil, and it lies with the medical profession to employ it. Refuse to subscribe to any American journal that within the year publishes more than twenty per cent. of its articles, excerpts or reviews from foreign sources. Strike at the circulation and bleed the foreign faddism from our (the patient's) circulatory apparatus. Regenerated blood will course through the sluggish system, and the *bacillus Europeæ* will give way to the Monroe-doctrine antitoxin.

Detroit, Michigan.

LOCALIZED NEURITIS OF THE BRACHIAL PLEXUS.

BY WILLIAM C. KRAUSS, M.D.

The following interesting case of neuritis of individual strands of the brachial plexus is worthy of careful consideration—first, on account of its extreme rarity; second, because such are in many instances erroneously diagnosed and consequently improperly treated; third, to direct attention to this form of neural disease and to warn against the assumption that all pain about the joints is of rheumatic or neuralgic character.

John S——, age 32, height five feet eight inches, weight 150 pounds, complexion dark, constitution strong, healthy, robust. Father and mother are living and healthy, aged 70 and 68 years respectively. Grandparents lived to old age. No history of cancer, syphilis, tuberculosis or insanity in near or distant relatives obtainable. Nothing of note transpired in his early life. Worked at various occupations until his twentieth year; then enlisted in the British Army and was sent to India, where he contracted gonorrhœa and syphilis, secondary symptoms appearing in due time. He was appointed instructor in the Army gymnasium, which offered him unusual facilities for the acquirement of the alcohol habit, which he willingly accepted. Returning to England in 1889, he shipped in a steamer bound for Panama. Here he was taken with malarial fever—which has at irregular intervals afflicted him ever since. Besides malaria he has within the past three years been afflicted with rheumatism and has been unable to accomplish any work.

He entered hospital January 16th, 1894, and was discharged as improved twice, but would soon return with jaundice, nausea, and muscular pains. Despite treatment the patient did not gain flesh, anæmia increased, and he would often be compelled to remain in bed for several days with tinnitus aurium and headache. During such attacks he would vomit a greenish fluid.

About January 1st, 1895, he began to improve; general health was good and he suffered no pain. He was discharged from hospital February 15th, and returned February 23d. Complained of severe pain in right shoulder. Was put on rheumatic treatment, but no special notice was paid to this shoulder for some days. When this part was examined there was found much tenderness in region of joint.

March 29th this man came under my personal care, complaining of severe pain in the region of the shoulder-joint, just over the acromion, extending into the supra-clavicular space, then radiating toward the occiput; also pains about the scapula and upper part of the humerus. On account of weakness and stiffness he was unable to use the right arm as dexterously as the left, although he is right-handed. Passive motion of the shoulder-joint did not cause pain. Pressure over the acromion process and over the supra-clavicular region (Erb's point) was extremely painful, while pressure through the shoulder-joint evoked hardly more than the normal sensitiveness. Disturbances of sensation, as to pressure, pain, heat, and cold, were entirely wanting.

The wasting of the muscles about the right shoulder-joint was at once evident. The right shoulder had lost the characteristic roundness and fullness; it was angular and the acromion very prominent, due to the atrophy of the deltoid muscle. The right shoulder was from one to two inches lower than the left; the scapular muscles, supra-spinatus and infra-spinati, markedly atrophied, the spine of the scapula being brought thereby into undue prominence. The trapezius and rhomboids, major and minor, and levator anguli scapulæ, also participated in the wasting, as demonstrated by the drooping of the shoulder and inability to draw it backward and upward. The serratus magnus likewise was affected, as shown by the "angel's wing" appearance of the scapula when the arms were extended forward, the scapula, especially the posterior border, projecting from the chest-wall.

When the arms were extended, the right offered much less resistance to pressure than the left; when raised over the head the right arm was easily brought downward, while the left required much more force on the part of the examiner.

The atrophied muscles were soft, flabby, and when brought into play non-resistant.

Circumference of left arm at nine, six, and three inches respectively from the acromion, 9¼, 9¾, and 11 inches; right arm, 8½, 8¾, and 10¼ inches. Distance from sternum to vertebral column three inches below the right acromion (passing over the affected joint muscles), 18½ inches; distance over the left shoulder, same measurement, 19¼ inches. Distance over shoulder on a level with the lower border of the second rib, *right* side, 8 inches; the same on *left* side, 8¼ inches. Semi-circumference of chest three inches above nipple, right side 17½ inches, left side 18⅜ inches. Muscle irritability over the affected muscles lost. An electrical examination was not made.

It will thus be seen that, according to measurements, active and passive motion, external appearance, and by palpation, the deltoid, trapezius, rhomboids, levator anguli scapulæ, supra- and infra-spinatus, and serratus magnus especially, were all affected by some lesion having the same symptomatic sequelæ in common. Along with this condition there were present subjective pain and pain on pressure over the nerve trunks, and absence of muscle reflexes or muscle irritability.

The muscles of the lower arm and hand on the right side were unaffected, thus proving conclusively that the brachial plexus *in toto* was not implicated, but only individual strands. The nerves supplying the affected muscles come from the fifth and sixth cervical nerves, which form the outer cord of the brachial plexus.

The ætiology—whether the neuritis was the effect of a toxic agent, traumatism, or pressure of some inflammatory process—must be left unconjectured. Any one of the agencies which he has combated would be sufficient to provoke a neuritic process; and to eliminate any one as the supposed cause would be open to question.

The patient improved under treatment, but left the hospital before full recovery.

Buffalo, N. Y.

DIAGNOSIS OF INJURIES OF CRANIUM AND CONTENTS.

BY B. G. GUDDEN, M.D.

The study of cranio-cerebral topography, locating the average relation of nerve-centres with well known functions, is indispensable for correct diagnosis, especially in tumors, where motor symptoms alone may lead us on the right track. If tumors are exostoses, they have the appearance and character of deformities, and may be the result of traumatism or tertiary syphilis, and for diagnosis one is obliged to rely solely upon intracranial symptoms. Severe headache and pain set in early, but both are limited in localizing value, unless the headache be confined to a certain place and the pain aggravated by percussion. Cerebral vomiting and vertigo are characteristic, the latter being more pronounced in cerebellar than in cerebral growth. — Frequency and severity of convulsions may give some clue to the progress of a tumor, indicating its site if they affect regularly the same group of muscles. Choked disk, mostly double, denotes the presence of a growth and is often combined with optic neuritis; in the latter case the lesion is apt to be on the side where the least swelling occurs. Doctor Senn, citing five cases of cerebral tumors, remarks that in three neuritis was present, all of which were fatal. While this may have been coincidental, he holds that neuritis might arouse suspicion of serious complication (advanced stage?), and deems it preferable that the diagnosis be made before the onset. In rare instances we meet with monocular choked disk, indicating tumor in the opposite hemisphere.

Paresis of single or more muscles suggests pressure, but may be the result of infiltration of pathogenic matter in nerve tissues. Of greatest importance is the presence of hemianopsia, pointing to a lesion of the cuneus on the same side. This eye symptom alone may lead to correct diagnosis of tumor.— Birdsall and Weir report a case where it was the only decisive symptom besides the minor ones of diplopia for distance, numbness of right leg, and staggering gait.*

Doctor Ranney's test of hemianopsia recommends itself: The patient presses one lid down and concentrates the gaze of the open eye on the extended forefinger of the physician, who, with his unemployed hand, moves a piece of white paper to the right and left above and below the finger, asking whether the two objects are seen simultaneously and distinctly, the retina being blind on the opposite side to that upon which the moving paper is lost sight of.

Mental disturbances, hallucinations, delusions, word-deafness, word-blindness, paraphasia, agraphia, in brief one or more conditions of sensory aphasia, may be found with tumor. If the growth invades special centres, the cortical motion centres, or the nerves extending from them, the location can be reasonably well diagnosed; moreover, if several centres have been successively attacked, the lesion is traced by irritation and paralysis. Aphasia is a symptom of tumor in the third frontal convolution of either side, according to right- or left-handed habit. If blindness develops rapidly, leading to internal hydrocephalus, accompanied by the usual pressure symptoms, the lesion is likely in pons or cerebellum. Coexistence of impairment of sensation with hemiplegia, is considered by Ranney an almost positive diagnostic sign that the exciting cause is within the substance of the brain and not upon its surface.

The anterior portion of the frontal lobes, the temporo-sphenoidal lobe (except part of left side), a great part of the parietal and occipital lobes, and to a limited extent the cerebellum, may be affected by a tumor of large size without any localizing symptoms whatever, as it does not interfere with the special senses and only manifests itself by headache, vomiting, choked disk, and convulsions. If the tumor lies in the cortex, there may be tenderness on pressure over its seat, and in some instances a local rise of temperature; the absence of anæsthesia, and affection of motor centres in this part of the brain, are of great diagnostic value. In a single and small tumor the localizing symptoms are confined to one centre, with insignificant or no intracranial pressure.—If multiple and far-apart centres are involved, and the pressure symptoms are very marked, it is either a multiple or an exceptionally large tumor. Displacement of the eyeball, which

* *Medical News.*

occasionally occurs in a tumor of anterior fossa of the base of cranium, indicates penetration through the superior arch of the orbital cavity.

Previous history of syphilitic or tubercular infection, or of traumatic injury, is valuable as to the nature of the growth. Tubercular tumor is apt to be multiple, and usually occurs before the twenty-fifth year; sarcoma and glioma are usually confined to middle life and old age.—Parker states as a differential point between gummata and other tumors, that in the former no optic neuritis is observed; considering the fact (according to Allen Starr) that more than half of all tumors are tubercular, the importance of inquiry in this direction is obvious.

Differential diagnosis between tumor and abscess is guided by the comparatively slower development of tumor—time varying from several months to two years. Again, there is subnormal and fluctuating temperature in abscess, while tumor seldom produces rise or fall. Absence of choked disk speaks for abscess. The greater percentage of cerebral abscesses is due to aural suppuration or to chronic inflammation of the ear where the mucous membrane is destroyed, the bone laid bare, perhaps carious, and filled with septic discharges of a pathogenic character. (Roehrer.)

Barker classified the different pathological conditions which may be derived from primary suppuration into: General septic meningitis; plastic phlebitis of the sinuses; pyæmia alone or connected with phlebitis; abscess of cerebellum; and abscess of cerebrum.

Aural disease at times produces an abscess within an inch of the inferior surface of the brain, the cortex remaining intact; but most abscesses are situated in the temporo-sphenoidal lobe between two vertical lines, the anterior of which passes through the tragus and the posterior two inches back of it, pressing on Broca's convolution, producing motor aphasia. Abscesses due to ear diseases are either encapsulated or diffuse, differing from other cerebral abscesses by being covered by a circle of an inch and a quarter above and behind the meatus, the "dangerous region." (Barker.) In diagnosis, consider sudden cessation of chronic ear discharge, nausea and vomiting, initial rise of temperature followed by subnormal fall yet always higher over the abscess, dull ache in temples, neck, and mastoid region, frequent pulse (contrary to other brain abscesses, where it may be as low as 30 to 40), foul tongue, and fœtid breath; optic neuritis and choked disk may be present.

In cerebral abscess, ptosis, anorexia, vomiting, loss of control over bowels and bladder, convulsive epileptoid twitching, and paralysis, may be observed, the latter as localizing symptom. The headache may be over the lesion, but oftener first general and then frontal. If not coped with, the dullness gradually deepens into coma, and the temperature may rise preceding lethal termination.

Von Bergmann's diagnostic advice demands consideration from an ætiological standpoint, as a primary or idiopathic brain abscess is unknown.—He distinguishes acute cortical abscess directly beneath the site of wound, resembling diffuse traumatic meningitis, and a later form occurring even months after and not in direct connection with the injury.

In cerebellar abscess, muscular rigidity of the neck and occipital headache may be observed; vertigo and vomiting, unsteady gait and muscular incoördination indicate seat of lesion in the middle lobe. Pressure on the lower part of the Rolandic region is manifested by paresis or paralysis of the opposite side of the face, and subsequently arm and leg. If the latent part of frontal or occipital lobe (excepting cuneus) is affected, localizing symptoms are reduced or absent. Immobile pupil is important as to the side of the lesion.

Cerebral abscess arising from ear disease differs in temperature from pyæmia (which is subject to acute fluctuations and at times rigor) and from meningitis (which induces high temperature, earlier dullness, coma and delirium, photophobia, contracted pupils, and rigid cervical muscles—it develops within three or four days, while the formation of an abscess occupies a week).

The differential diagnosis between cerebral and cerebellar abscess is not clearly defined, but Barker finds the favored seat of the latter lesion at the outer and anterior part of the lateral lobe, bordering petrous bone, and marked by characteristic lowered temperature in the evening and sluggish but perfect cerebration. Extra-dural abscesses are diag-

nosed by pain above and behind mastoid and by a rise of temperature to 102°–104°. Exploratory puncturing and trephining may be mentioned as final heroic diagnostic measures.

Blows, falls, frights, etc., are responsible for contusion, concussions and fractures of the head, and the brain troubles in their wake.

Ordinary slight contusions will not leave serious complications; the swelling, due to hæmorrhage under the scalp, subsides soon, and simultaneously the prominent round-edge ridge above the plane of the skull. If fracture is associated, there is rarely an elevation, and the ridge margin is sharper and more irregular; a decisive diagnosis can be best reached by antiseptic raising of a horseshoe-shaped flap, especially if the scalp is much swollen.

In severe cases, abscess, sclerosis, and even necrosis, may follow contusions. If they involve the brain they are considered concussions, or more properly lacerations of the brain—derived by direct or indirect force. Nausea, vomiting, giddiness and confusion succeed in slight cases, while more serious concussions are indicated by feeble, fluttering heart, cold clammy skin, sluggish drowsy cerebration, involuntary passing of fæces and urine, vertigo, and sometimes cerebral irritability; coma, meningitis, or encephalitis may precede death.

All signs of fractured base may be present with concussion, and again concussion can be connected with fracture as in the case reported by Barrow,* of compound comminuted depressed fracture of skull with laceration of brain, accompanied by opisthotonos, facial (and later general clonic) convulsions, left motor paralysis, twitching of left orbicularis oculi, drawing of left mouth-angle, retraction of head; neither headache nor discharges from nose or ear were present. Depressed fracture produces immediate symptoms; hæmorrhage gradual.

Fractures, single or multiple, may occur in any portion of the cranium, and likewise may extend from vault to base. Compound fractures are open to germ infection and resultant septic meningitis. Direct violence affects the vault, indirect violence (as a fall) the base. Nature replenishes the loss of bone by callus or fibrous tissue, but the damage to the brain—"the pearl in the shell" is not so easily repaired.

A fissure, simple or compound, may be diagnosed by percussion which produces a hollow, often very faint, "cracked-pot" sound; its depth, in case of depression of funnel shape, can be felt by touch. The rare case of rupture of the dura is revealed by the escape of cerebro-spinal fluid and tense translucent swelling.

Compound fractures are detected by both sight and touch. Coagulated blood of a pericranious slit or oozing from Wormian bones is at times mistaken for a fracture, but the simple test of sponging suffices, as the dark blood line of linear fracture does not yield to washing; again, the saw-shape of suture assists discrimination.

A blow struck above or in front of the left ear may shatter the inner table, manifested by intracranial irritation, inflammation, possibly palsy of speech and right arm; hemiplegia, aphasia, even temporary insanity,* may be symptoms of complicated fracture. In the opinion of Doctor Rey, a fracture can result in general paralysis, which in his experience followed a badly united frontal bone.

Depressed fractures date at times from operative child-delivery, causing ptosis, paralysis, etc.

Lesions of the base can affect one, two, or in very rare cases three, fossæ,† and are most frequent in the middle and most dangerous in the posterior fossa. Canes, knives, umbrellas, etc., thrust in orbit, nose, or eyeball, often cause fracture of the base, proven by the escape of cerebro-spinal fluid or by long-continued bleeding from the ear with watery discharge, which is aggravated by violent respiration and change of the position of the head—bleeding from a wound without fracture being easily controlled.

Compound fracture with unruptured tympanum shows no symptom of discharge, though treacherous in its communication with the air through naso-pharynx and Eustachian tube. The orbit ought to be a

---

* *Annual of the Medical Sciences*, 1893.

* Reported by Roehrer.

† Walker, *Annual of the Medical Sciences*.

special object of examination, as the folds of the upper lids tend to hide the entrance point of injury. A fracture of the orbital plate, punctured or unpunctured, can be diagnosed by blood under the conjunctiva of eyeball and, somewhat later, of the lid.

Ecchymosis of the mastoid region, spreading in crescent shape, is a localizing symptom of the lesion in posterior fossa.

A notable rise of temperature announces the complication of suppuration or meningitis; if excessively high (106°–108°), of lethal laceration of the brain. The average temperature after a shock is subnormal, succeeded by a rise to 100°–101°, relapsing soon to normal or subnormal. Exploratory incisions are often made, and the escaping fluid in all cases examined.

An important diagnostic point is mentioned by Wyman: the presence of "sense-interval" (intermitting stunned and conscious conditions) in fracture of the base.

Wounds of the brain are produced by swords, knives, shots, etc., through channels before named, else open fontanelles of children and large parietal foramina of adults. Wounds of the head may be complicated by laceration of the brain, fragments of bone and hair, serious hæmorrhage, simple, compound, punctured or unpunctured fractures. If a foreign body enter the latent region of brain, it may remain there for years with barely a symptom of trouble, while the penetration and presence of it in the speech centre would be followed by motor aphasia.

Word-blindness and apraxia warn one to look for injury above and behind the ear; and palsy of face, arm, or leg, to search in the cortical centres. The symptom of hemianopsia calls for rigid examination of cuneus. Wounds of the anterior portion of brain and skull offer more hope than those of any other cerebral region.

The symptoms of gunshot wounds do not differ materially from others, but can be less exactly localized on account of their extension, the small entrance point standing in no proportion to the injury of the brain and to the dimensions of the ball exit.

Delvet and Dragon* divide suicidal shots into four series: Ball lodged in the substance of one brain hemisphere: Ball traversing both hemispheres and landing in opposite wall of the skull: Same conditions, but ball turning back and lodging in brain substance: Ball passing clear through.

The second and third are most frequent, and the experimentors found the dura almost always torn at the point of reflection of the ball.

A shot may but graze the outer table, merely fissuring it, or may communicate the shock to the inner table, producing fracture. All injuries are followed by headache, which, if severe and unchecked, develops into encephalitis, coma, and death. Of diagnostic value is the minute inquiry into circumstances and time of injury.

If the cicatrix of any wound is tender, producing radiating pain, and the pressure becomes aggravated, it may cause months or years later epileptoid fits which time and habit confirm into epilepsy. Bergmann distinguishes: Reflex-epilepsy, caused by affection of peripheral nerves, only indirectly affecting the cortex: Epilepsy resulting from lesion of cortex itself.

Alteration in the texture of cortical tissues from fatty or other degenerative changes may produce epilepsy. If the lesion lies over motor centres, and the fits are confined to the connecting muscles, their close mutual relation is obvious.

Oshkosh, Wisconsin.

**Medical Annual*, 1892.

CASE OF CONGENITAL CYANOSIS.

BY H. W. MCLAUTHLIN, M.D.

Joseph H——, aged 5½ years, born in the United States, is a twin child whose mate died a few minutes after birth. Nothing of importance in the family history; parents living and in good health; was always puny and delicate, and from the first it was noticed his nails were curved and blue. When five months old had entero-colitis, and during his first and second summers was subject to attacks of diarrhœa; when four years old, had whooping-cough severely. Never had rheumatism. Mother thinks he began to talk and that he cut his teeth at the usual time, but he did not walk until two-and-a-half years old, and exhibited weakness of the ankles for a considerable time thereafter.

General cyanosis was first noticed when

he was two years old, especially after exertion, crying, anger, or any excitement. The cyanosis increased and began to be attended with attacks of pain in the region of the heart, which would occur not only during the day, but at night, causing him to wake screaming and with heart beating violently. At first these attacks occurred only once every one to four weeks, but progressively increased until at last they often occurred daily and patient was never free therefrom longer than a week. They not only came on when he was playing or excited, but also when perfectly quiet or asleep. When awake, the attacks often caused him to fall powerless and screaming, become very blue, breathing heavily and quickly, and the heart beating violently; at the time when these notes were made he had never lost consciousness nor had convulsions or twitching. Each attack lasted from five to fifteen minutes, and was apt to recur after an interval of several minutes, at the conclusion of which he became very drowsy, falling asleep, and awaking in his normal condition except, perhaps, for slight headache, nausea, or both. He complained greatly of being cold, and the feet and hands were always chilly to touch. Appetite generally poor, and bowels always constipated. He plays but little, always guardedly, and has dyspnœa on the slightest exertion. Always had some cough, and takes cold easily. Is drowsy and sleepy much of the time, and especially after a meal. Easily irritated and often peevish. Seems bright and learns quite readily. Skin always dry. Has never had œdema or dropsy. Urine shows nothing abnormal.

Physical examination showed him to be considerably emaciated; face of a bluish color, as well as the hands and feet; lips, tongue, interior of mouth, ends of fingers and toes of a bluish-black color; nails clubbed and curved; veins on chest prominent; temperature normal; pulse 104, small, but equal in both wrists. Heart dullness extending one inch to the right of the sternum, the apex beat being seen, felt and heard most distinctly in the sixth intercostal space, about two inches to the right of the nipple and one-half inch to the left of the sternum. No murmur at the apex, but a systolic sound heard clearly over the base, loudest in the second and third intercostal spaces, apparently equal in intensity on both sides of the sternum, and faintly heard in the neck and near the lower angle of the left scapula; both aortic and pulmonary second sounds apparently exaggerated. Examination of the other organs gave negative results, except a slight enlargement of liver.

Shortly after this examination, I witnessed a mild attack. While walking slowly on the street he complained of feeling tired; his face became dark blue, lips and finger-tips almost black, the heart beat violently but irregularly, and he would have fallen if not supported. The breathing was panting. On being taken to a convenient place and allowed to lie down, drowsiness supervened; he lay quietly for some minutes, the blueness gradually lessening. Pain was slight in this attack, but his mother stated that shortly after, on again attempting to walk, the attack recurred and more severely.

The patient has since had one attack of convulsions, which occurred about June 1st. For a few days previous he had been more quiet and had been more troubled by dyspnœa and cyanosis. The convulsions were general, and he was unconscious for some minutes. When seen a few hours later, he seemed perfectly natural.

Although the diagnosis of congenital heart lesions may be easy, in a given case it is generally difficult and often impossible to determine the exact lesion. The condition is due to arrested development, to endocarditis in fœtal life, or to both. The arrest in development may take place at any stage in the growth of the heart. If, however, the heart remains in a very rudimentary state, the child can survive only a few hours, or, at the most, a few days. If the arrest in development occurs at a later period, as is generally the case, the normal mechanism may be more nearly complete; the cardiac partitions may be deficient, or the large vessels misplaced or even transposed.—Thus the aorta may be displaced to the right, arising in part or wholly from the right ventricle, while the pulmonary artery may arise from the left ventricle. Eustace Smith says:*

> When the aorta is merely displaced to the right, without malposition of the pulmonary artery, we usually find some obstruction to the passage of blood from the right ventricle through the latter. The artery is too small, or its valves are incomplete, or the blood is prevented from passing freely into it by some constriction of the ventricle near its outlet, or its channel may be entirely obliterated, in all of which cases the foramen ovale must remain open or the circulation could no longer be

* Diseases of Children.

carried on. The blood, being unable to find its way in sufficient quantities to the left side of the heart through the lungs, continues to follow its original course through the opening in the auricular septum, and the foramen ovale remains open. If, however, the aorta arises sufficiently to the right to allow the escape of blood through it from the right ventricle, the foramen ovale and ductus arteriosus may cease to be pervious.

Constriction in the pulmonary artery, with deficiency in the septum of the ventricles, so that the aorta communicates with the right ventricular cavity, is the commonest form of congenital malformation of the heart. Sometimes the descending aorta arises from the pulmonary artery, being apparently a continuation of the ductus arteriosus. In this case a small ascending aorta arises from the left ventricle to supply the head and neck by the usual vessels.

On the other hand, the defect may consist, not in the patent fœtal openings after birth, but in too early closing of same before birth; and should such be the case with the foramen ovale, all the blood must pass through the pulmonary artery and the ductus arteriosus, whereby the right heart becomes immensely hypertrophied, the left side being unnaturally small. Or if the ductus arteriosus closes too early, the aorta may arise from the right ventricle and give branches to the lungs, the pulmonary artery remaining rudimentary. The congenital lesion may also be a narrowing of the openings of the large vessels or defective valves arising from either malformation or fœtal endocarditis, which almost always attacks the right heart, this being more active than the left in fœtal life. In all cases the heart, especially the right side, is greatly hypertrophied.

In attempting to diagnose the exact condition which exists in the heart in these cases, one is at once placed at a formidable disadvantage in that, instead of having, as usual, a heart of which he knows the structure, the number and situation of its openings, and the number and working of its valves, and instead of having a normally directed blood-current—in which conditions the physical signs have, consequently, a definite meaning—he has to deal with an organ in which the number and position of the openings and the direction of the blood-current are unknown except by conjecture. Certain rules, however, may be borne in mind: In the first place, some forms of congenital defect are quickly fatal; an infant whose heart consists of only two cavities will probably not live a month. Transposition of the aorta and pulmonary artery also brings death within two or three years, and generally within one year; and the same is true where the aorta arises from the pulmonary artery.—If the child has survived three years, the above conditions can be excluded.

Some contraction at the orifice of the pulmonary artery is the most common lesion, probably associated with patency of the foramen ovale and, perhaps, with a connection between the aorta and right ventricle and patency of the ductus arteriosus. The physical signs of this condition are a systolic murmur heard over the base of the heart, especially over the pulmonary valves, not transmitted into the large vessels, associated with enlargement of the right side. The fact that in the case reported the murmur was apparently transmitted to the large vessels, seems to indicate there might have been other pathological conditions present than those just noted.

An open foramen ovale is seldom a solitary abnormality, although congenital cyanosis without a murmur, or with a very faint one, and no enlargement of the right heart in a child at least three years old, points to such a condition. Hochsinger says:

The entire absence of murmurs at the apex, with their evident presence in the region of the auricles and over the pulmonary orifice, is always an important element in differential diagnosis, and points rather to septum defect or pulmonary stenosis than to endocarditis.

Ostler adds that stenosis, obliteration, and atresia at the pulmonary orifice, or stenosis of that portion of the right ventricle adjoining it, with or without imperfection of the ventricular septum, patency of the foramen ovale and persistence of the ductus arteriosus, constitute the most important group of all congenital heart affections; and 119 of the 181 cases of congenital heart anomalies collected by Peacock came under this class, as did also eighty-six per cent. of those cases living beyond the twelfth year. DaCosta corroborates. But all authors seem to agree that an exact diagnosis cannot be made, and that other conditions than those diagnosed are liable to be present.

As regards symptoms, the more common were well represented in this case. The most striking is the livid skin or cyanosis, which may not be present at birth, or at least not to any marked degree; the extremities of the fingers and toes generally show it, however, although it may be weeks or months before it becomes sufficiently general to excite attention.

Now what causes the cyanotic appearance? Hunter attributes it to intense mixing of the arterial with the unoxygenized blood, a view that has been proved incorrect. In the first place, cyanosis may occur where there is no mixing of arterial and venous blood; and in the second place, the degree of cyanosis is not dependent on the amount of venous blood contaminating the arterial current. Morgagni and Peacock were the first to show the true cause to be intense general congestion, due to stasis of blood in capillaries dilated by long-standing congestion, aided by imperfect aëration of the whole mass of blood.

The prognosis of these cases depends largely, of course, on the degree of obstruction to the circulation, but is generally very unfavorable. One-half the cases die in the first, and only about one-third survive the second year. On account of the constant and intense venous congestion, the functions of all the organs are imperfectly performed; the child is poorly nourished, thin in flesh, and constantly liable to catarrhal troubles of the respiratory and digestive tract. The establishment of respiration at birth, the eruption of the teeth, weaning, and the diseases peculiar to childhood, are always, at best, trying periods, while in a child with a congenital heart malady they are periods of great danger. And yet, occasionally, these cases do live to adult life. Cyanotic children often die in convulsions or from heart failure during attacks of syncope. Pneumonia and tuberculosis are rather frequent complications, and DaCosta calls attention to abscess of the brain occurring in cases of malformed heart without apparent cause. Certain symptoms are especially unfavorable, such as frequent attacks of syncope, great drowsiness, convulsions, or other signs of brain irritation, as well as symptoms of renal disease.

Regarding treatment, it is evidently desirable and important to keep the little unfortunate as far as possible from being overtaken by the diseases and difficulties to which he is so peculiarly liable. On account of the lack of vitality, the cold extremities, and the danger of contracting cold, warm clothing is necessary as a protection from changes of temperature and inclement weather, while at the same time the advantage of fresh air, in keeping up the general health, is to be borne in mind. Again, on account of the malnutrition, care as to diet is essential, that the patient may, on the one hand, be as well sustained as possible, and, on the other, that he may be guarded from the ills arising from his natural tendency to gastro-intestinal catarrh. An occasional mercurial, to relieve, to some extent, the overloaded portal system, is judicious. Freedom from excitement and over-exertion, and speedy and careful attention to all ailments, however slight, are important. Owing to the natural dryness of the skin, a bath should be given at least once daily, followed by brisk friction. For violent attacks of palpitation, digitalis may be guardedly tried, and for the attacks of syncope and dyspnœa stimulants and ammonia are indicated.

The urine should be watched in order that the appearance of albumen, or other evidence of renal disturbance, may suggest prompt treatment.

Denver, Colorado.

TRAUMATIC INJURIES OF THE EYES.*

BY H. MOULTON, M.D.

In these days of preventive medicine, diseases of the eye have received due attention, but little is heard of prevention of injuries, which, in reality, can often be more easily guarded against than the maladies *per se*, for they have more tangible causes and can be more readily foreseen. For instance, a man entering upon a certain occupation knows beforehand that all who engage in that pursuit are liable to receive injuries to their eyes. Grinders of tools, for example, are liable to suffer frequent accidents from the impact of

* Read before the Indian Territory Medical Association.

flying particles from the wheels; these particles, in dry grinding especially, are hot, and do more or less damage to sight, according to the portion of cornea struck and the depth to which they penetrate. All these injuries can easily be prevented by the simple plan of wearing plain protective spectacles of glass or mica. So too of many other occupations.

Mr. Simeon Snell, of Sheffield, England, in 1894 read a paper before the British Medical Association, in which he dealt very fully with the relative liability of certain trades to produce eye-injuries. With us, in the Indian Territory, many of these causes are yet of no concern—we see nothing of injuries arising from exposure of the eyes to the intense glare of electrical welding, where the chemical rays set up a severe inflammation of the conjunctiva with swelling of the lids and involvement of the cornea. But there are two occupations, at least, which concern us and are among the most fruitful sources of eye-injury. One is that of grinding, or "saw-gumming," which is connected with every saw-mill in the Territory; the other is coal-mining; and we can all testify to many an injury derived from one or the other of these sources. The colliers, perhaps, suffer less frequently than the mill-hands, but the injury is apt to be more serious; the particle of steel from the pick or drill, or the bit of coal, is larger, flies with more force, and more often penetrates the tunics of the eye; as a matter of fact, the particles from the emery wheel seldom perforate. Snell, corroborating Fuchs, declares the wearing of protective glasses among such workmen should be made compulsory; and Magnus would prohibit the employment of one-eyed men in occupations dangerous to eyesight. The great obstacle in the way of glasses is the objection of the men themselves; and though some of the objections are valid, the obvious advantages are so great and the experience of those who have tried them is so favorable that I think it behooves the medical profession to bring the facts more critically to the attention of both patients and the general public.

Many of the more serious accidents, however, occur without reference to occupation —such, for instance, as the wounds inflicted by scissors in the hand of the child, by the stick of kindling-wood under the axe of the careless man, or by the stray bird-shot from the muzzle of a companion's gun. Against these we can suggest no definite precautions; and yet, in England, I am told, some sportsmen, when shooting, habitually wear heavy protectives of crystal one-quarter of an inch in thickness, set in stout steel frames, fitting closely to the margins of the orbit, and that are said to be absolutely shot-proof. This seems to speak better for the discretion of John Bull than for his marksmanship.

It is an error to exhibit carelessness regarding the lighter injuries; there is no eye-wound so slight that it may not result seriously! To illustrate: August 3d, 1893, a grinder of tools in one of the furniture factories of Fort Smith received simultaneously in both eyes many fine particles from his wheel. They apparently did but little damage to the cornea, none penetrating beyond the superficial layer; yet, two days later, a double iritis developed, which ran a severe course, fortunately terminating in recovery. The iritis was clearly induced by the traumatism, there being no other cause to account for it.

When the grave responsibility of deciding what to do with an eye which has recently suffered a perforating injury confronts one, he is apt to be confused by the apparently contradictory testimony that enters into the clinical histories of other and similar cases. Eyes considered convalescent and safe have at last been the cause of sympathetic blindness in the fellow optics. So, too, many an experienced ophthalmic surgeon has advised enucleation, which has been declined, and the injured eye remained harmless for a lifetime. Experience is a great teacher, but has not yet taught everything. Of course, where sight is destroyed and the mutilation is great, or where the wound is in the ciliary region, with grave complications, or when a large foreign body cannot be extracted, decision is usually easy. In most other cases, and sometimes even in these, there is a growing tendency to ask the question: "Cannot the eye be saved, if not with sight, at least with a good appearance?"

Since the general acceptance of the theory of the infectious origin of sympathetic oph-

thalmia, the question of infection is usually most important and one on which a decision must be based. In the first place, an accurate investigation of the nature of the injury is necessary to enable one to decide whether the injured eye is likely to become the seat of an infectious inflammation:

Is there perforation?

What structures are injured, and how extensively?

What produced the injury?

Does the eye contain a foreign body, and if so, what is it?

Most difficult, often, is the question whether the eye contains a foreign body; and this is most important in that the body is liable to carry with it the infection, thus accounting for the fact that most of such cases, undisturbed, lead to sympathetic trouble. Something may depend, also, on the character of the foreign body: Glass is apt to be aseptic, while iron is not: Fuchs speaks of the dangerous nature of copper and brass; but at the Eighth International Ophthalmological Congress, such eminent authorities as Leber, Knapp, Noyes, Roosa, Kipp and Meyer declared foreign bodies of brass and copper are apt to be aseptic, and hence, if small, likely to be tolerated.

The difficulty of determining the presence of a foreign body is enhanced by its peculiar location, by blood in one of the chambers, by cataract, etc. A gentleman, on turning a corner, into the face of a wind which was blowing with almost the force of a hurricane, was forcibly struck in the right eye by a small object. The eye felt as though it had sand in it for a day or two, and then was apparently all right for a week or more. Suddenly it began to inflame and become sensitive to light. When I saw the case, seventeen days after the injury, I found iritis, and over the upper temporal quadrant of the periphery of the iris a deposit of lymph, millet-seed in size, and apparently enclosing a small foreign body as of sand or glass. There was no mark on the cornea to indicate its point of entrance, which I supposed to be in the limbus and thus invisible. Atropine was instilled, and I expected, as soon as the inflammation should subside, to perform iridectomy and extract the foreign body with the piece of iris removed. But, much to my surprise, both the flake of lymph and the supposed foreign body were quickly absorbed. After continuing the atropine for three weeks the patient was considered well. Several weeks later, however, a relapse occurred. This time the case was under the care of an able oculist in a distant city, who found a flake of lymph on the base of the iris at its inferior nasal quadrant. From the history, and not knowing the location of the previous lesion, he supposed there was a foreign body, probably of glass, imbedded in the iris at the seat of the nodule. He, too, expected to operate after the subsidence of inflammation, and was disappointed in the same way as myself. The case afterwards recovered permanently under anti-syphilitic treatment. The appearances, without a coincident and misleading history, would have led to a correct diagnosis in the first place.

As a general rule, an eye containing a foreign body that cannot be extracted by the magnet or other means must be sacrificed. While a small body sometimes remains in the background of the eye harmless for life, and sometimes justifies conservatism, yet Knapp, in his Archives,* after presenting a series of cases, says: "These show again that foreign bodies in the background of the eye, though apparently tolerated, can never be treated."

To accomplish the prevention of infection of the injured eye, the wound is thoroughly cleansed, all possible foreign bodies being removed; then antiseptic treatment is applied, and the rent closed with sutures if necessary and practicable. Observe at the same time the rules of treatment demanded by a wounded lens, prolapsed iris, etc., if any of these conditions are present. Doctor P. D. Keyser, of Philadelphia,† reports two cases of injury to the ciliary body treated in this way, and my own experiences in this direction have also been most favorable. As it is said that sympathetic trouble never develops in less than two weeks from the time of injury, there is ample time in which to make the best of conservatism. The rational method will often, when intelligently applied, save eyes which would otherwise be lost.

---

*Vol. xxiii, page 174.

†*Ophthalmic Record*, April, 1894.

Abadie and Darier, of Paris, who are leaders in sub-conjunctival therapeutics, advocate the doctrine that sub-conjunctival injections of corrosive sublimate will prevent and cure (among other things) certain infectious processes within the eyeball, resulting from perforating wounds. If thus the infection of the first eye can be prevented or cured, of course, on the basis of this theory, no infection can be transmitted to the fellow, and sympathetic ophthalmia will be prevented. Some apparently remarkable cures have been reported, yet numerous failures warn that the method cannot always be depended upon; it has not been much used in the United States. At the recent Congress at Edinburgh the subject was reopened by Darier; and while he, Deutchman and Dupour strongly advocated the injections, Bach and Guttman as strongly condemned them. Abadie recommends the injections for a time, when, if unsuccessful, he would proceed to enucleate. This would seem to be justifiable to a degree perhaps, provided the practitioner always keeps within the golden *time* limits of safety.

De Wecker and others, in accordance with the theory that the infectious material finds its sole path of transmission to the other eye in the optic nerve, seek to obliterate this path by resection of this nerve. With this operation has been waged what is termed "a campaign against the abuse of enucleation;" but numerous failures under the most favorable circumstances have been reported by Röhnur, Marschall, Krones, Schweiger, and others.* There certainly must be some other path of transmission than along the optic nerve; at all events there is a possibility of failure in resection, and if successful the recovery is tedious and painful. To offset these objections, there is only the cosmetic argument left, whereas on the side of the radical operation there is the prospect of an almost certain success, quick recovery, and a permanent removal at once and forever of the source of infection. In this light, who would not prefer enucleation?

At present one feels safe in rejecting resection as a substitute for enucleation, if the object is the prophylaxis of sympathetic ophthalmia. Of most value is the antiseptic method, supplemented by the electro-cautery to the wound if need be. Next in value will perhaps be proven to be the sublimate injections.

All patients that are treated conservatively must be warned that they are forever in danger, especially if they have foreign bodies in their eyes. It may be possible in future to reduce the number of enucleations, but if practitioners wish to secure sleep at night they will in many cases continue to remove injured eyes for a long time to come.

Fort Smith, Arkansas.

*See article by Röhnur, translated by Webster Fox in *Ophthalmic Record*, vol. ii, No. 7.

SOME SUGGESTIONS REGARDING RESPIRATION.

BY W. B. RUSSELL, M.D.

According to Dunglison, this is a function the object of which is to place materials—the mixture of venous blood with lymph and chyle—already in the circulation in contact with atmospheric air, in order that the vivifying qualities peculiar to arterial blood may be acquired. The organs for executing this function are, in mammals, birds, and reptiles, the lungs.

In man, respiration consists of mechanical and chemical phenomena: The mechanical are inspiration and expiration; the chemical, the formation of a certain quantity of carbonic acid, the absorption of a quantity of oxygen, and the disengagement of a quantity of water in state of vapor.

In healthy animals, respiration is easy, full, gentle, regular, and without noise; in man at the rate of about thirty-five per minute in the first year of life, twenty-five during the second year, twenty at puberty, and eighteen in the adult.

The air of respiration has been divided into: First, the residual, or that which cannot be expelled from the lungs, but remains after a full and forcible expiration—estimated at 120 cubic inches: Second, the supplementary or reserve air, that can be expelled by forcible expiration—say 130 cubic inches: Third, the tidal or breathing air—about 26 cubic inches: Fourth, the complemental air—that which can be inhaled after an ordinary inspiration—which amounts to 100 cubic inches.

This gives a total of 250 cubic inches of air which the chest contains after ordinary inspiration in a medium-sized man. We have likewise normal respiration, deficient respiration, excessive respiration, impaired respiration, irregular respiration, oppressed respiration, spasmodic respiration, regarding which no special remarks are required.

Normal respiration is one of the most, if not *the* most, vital of the functions. Life would be impossible without air that contains oxygen in sufficient quantities to properly oxygenate the blood and complete the chemical change necessary to supply every organ and part of the economy with the elements of nutrition, and in a form to be easily assimilated and renew broken-down and waste tissue or cells and keep up the standard of waste and repair. If this respiration is not properly performed, one or more or all of the several functions of the system are placed at a disadvantage, and as a result we have various forms of disease.

And yet respiration is not wholly of the lungs, neither is all the oxygen employed in the chemical changes of the economy absorbed through these organs. The skin and stomach are two vital assistants that deserve attention. It is well known that the destroying of a certain amount of cuticle—the exact amount is somewhat of a moot question—by burns or other means, or even closing the pores and emunctories by paint or varnish, is to entail certain death; also it is essential that a constant supply of water be had by way of the stomach in order to keep up the seventy per cent. which the economy requires as a standard.

Personally I consider deficient respiration the corner-stone, so to speak, of a large number of maladies, and the function that in a vast percentage of cases requires first attention; notably many of the chronic cases and those of so-called debility or neurasthenia are of this class. When a patient, male or female, from fifteen to twenty-five years old, regardless of employment, has "nothing in particular the matter," but complains of a tired, languid feeling, with poor appetite and constipated bowels—or perhaps irregular diarrhœa; presents either scanty and high-colored, or copious and very light-colored, urine, with low or high specific gravity; is pale, or perhaps flushed, red-faced and full-blooded, thin and anæmic, or corpulent and bloated; sleeps poorly and requires an hour or two in the morning to get into working condition, and further presents a weak, easily compressed pulse and is "just good for nothing,"—then I look especially to the respiration, and likewise inquire carefully as to habits of life outside of business.

This class of patients pass from the hands of one physician to another, perhaps with as many different phases of diagnosis as there are prescribers, but do not get any better. Here, oftentimes, defective respiration pure and simple is the fault, and nothing more. The respiratory murmur is short and weak, and the amount of air inspired, even if forced, would not amount to more than ten cubic inches, and gives the "impression of being about one inch long;" if the patient has been obliged to ascend a flight of stairs and is examined immediately, the respiration is moreover labored, and an even smaller amount of air enters the lungs, while the pulse is rapid but without force, and the heart weak as to action though normal as to sound. The tongue may tremble when extended, and be coated.

Here the first essential is to teach the individual how to breathe. I immediately direct him or her to take three steps of twenty-four inches each on inspiration, and three more on expiration, for from ten to thirty minutes, three or four times a day; this, if persisted in for a few days, will usually work wonders. Now I increase the number of steps to six, and order the patient to bathe every evening in salt water, making the bath sufficiently strong with the Turk's Island product to equal in specific gravity sea water. This bath should be had *every* night on retiring, and be followed by a thorough rubbing of the back, arms, chest, and legs, with a coarse linen towel which has been previously dipped in a saturated solution of salt and water and made dry without wringing. Likewise give from three to four quarts of pure spring water every day until the secretion of the kidneys is normal both as to color and specific gravity. In one week the patient will be better in every way, and the insomnia, headache, constipation, palpitation and other ills relieved.

Not being a Christian Scientist, I find a

resort to drugs is often a material aid and more effective than prayers and the Bible. It is often advisable that the nervous system be stimulated, especially the sympathetic. The remedies I employ in order of value are: Marching and breathing exercise; salt bath and salt towel; plenty of cold water internally, and a cup of hot water before meals; belladonna, gelsemium, cactus, strophanthus, convallaria, digitalis, for the circulation; salts of soda or potassium, phosphoric acid, nitro-muriatic acid, phosphate of soda and lime, ignatia, nux vomica, chloride of gold and sodium, etc., as tonics. Alcoholic stimulants are better avoided, and even tea and coffee should be employed very moderately. The diet should be liberal and highly nutritious—beef (chopped or scraped), mutton, chicken, game, butter, eggs (raw, soft-boiled, poached, and scrambled); any quantity of bread and farinaceous articles if there is no special contra-indication in the way of indigestion; all kinds of ripe and well cooked vegetables, such as potatoes, spinach, young peas, rice; egg and milk puddings and ripe fruit for dessert; pure water, warm fresh milk, cream, as beverages. Pork, veal, salt meats—ham excepted,—hashes, stews, cooked oysters, pickles and spices, pastry and preserves, thick gravies, and all made dishes, are better avoided.

Case.—Mr. B——, aged 34, came under my care in May, 1887, "nearly dead," as he said, with consumption. Percussion and auscultation certainly revealed all the evidences of phthisis, which were supplemented moreover by frequent attacks of hæmorrhage. I ordered him stillingia liniment, and likewise gave a small bottle of ergot for internal administration. Then started him to breathing, to taking salt baths with the towel treatment mornings, and spring water. I took him to New Hampshire for two weeks in August, and kept him constantly out of doors climbing hills. He gained from the very first, and is now selling teas and coffees on the road, apparently in the very best of health.

I could cite numerous cases like the foregoing that have improved from the outset, in many of which there were even complications and serious structural changes. These patients recover under the arousing of will force and making extraordinary efforts to pass a large amount of air through the lungs. As before remarked, I often find it convenient to give some small doses of medicine for the mental effect if nothing else, and such can often be utilized in correcting structural changes. I also insist upon a generous diet. As a whole, I am well satisfied with the results.

I do not wish it understood, however, that I am possessed of a belief that drug remedies are not of value—the contrary is very often the case, and they may afford most timely and able assistance. But I do wish to emphasize the fact that sufficient attention is not paid to the gymnastics (so to speak) of the lungs, *i.e.*, teaching the patient to breathe naturally and normally. I cannot recall having ever seen any literature calling attention to this vital question.* One very often meets patients who are not strong, who are not really ill but debilitated—patients one of whose lungs on percussion exhibits a sound from a quarter to a full note higher or lower on the musical scale than its fellow; again, one side will vary in the height of key while resonance will vary in the same location; and yet there are no râles either mucous or crepitant—only general debility. Such a condition is often diagnosed incipient phthisis, yet the whole trouble may arise from deficient respiration. The lungs or a portion thereof lie dormant with no seated trouble, but in a condition exceedingly susceptible to disease processes. In the majority of instances the patient will be easily relieved by change of climate or following the foregoing instructions.—The climate change, however, is only beneficial in the degree that it enforces lung gymnastics, for when one goes to a mountain or seashore resort he falls into the prevailing fashion which compels every one to keep out of doors, to take long walks and drives, climb hills, and go in bathing—in fact, the mind is kept busy and the body active. The result is fuller respiration, which in turn brings increased thirst; an improvement in appetite follows, and thus general activity of the economy soon secures a new lease of life.

Providence, R. I.

* *The Sanitarian* is publishing a series of articles devoted to this very subject; the initial chapter appeared in the July issue, and the conclusion will appear in September.—Ed.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., AUGUST 26th, 1895.

Editorial.

EPISODIC MEDICINE.

Medicine is nothing if not episodic. Its history through more than thirty centuries proves this. Every few years a new idea or new principle is enunciated that succeeds for a time in dominating, perhaps to the exclusion of everything else, medical practice, possibly with some benefit, but often with material detriment to both practitioners and patrons.

It is within the memory of many living when most heroic venesection was considered a *sine qua non* in the treatment of each and every malady regardless of character or cause; when a case of lancets and a roll of bandage constituted the physician's passport to success; but like many another "fad," blood-letting was so completely overdone as to be practically annihilated in the rebound from this extreme. Then came starvation diet! "Live on a sixpence a day and earn it" was the watchword whereby all inflammatory processes were to be reduced and the seeds of disease starved out. With the reaction, which was only as yesterday, it was deemed essential to stuff the patient to repletion with stimulants and nourishment. Finally came a revamping of part of the old humoral doctrine, disguised under the title of Microbic Pathology, which has not only run riot, but led every tyro upon whose sheepskin the dust has not had time to accumulate, to consider it his duty to speedily discover a bacillus; just now the microscope and culture-tube are in the ascendant, while the principles upon which the medical art is based have nearly faded from view. As a result, germs have multiplied indefinitely, and we have not only a plethora of new discoveries to the extremes of absurdity, but there are even forgeries in bacilli.

Extremes are always dangerous, especially so in medicine. If modern practice is right, that of our forefathers during three thousand years must have been erroneous — deadly wrong, in fact—and we must be greatly wiser than our fathers and entitled to the profound gratitude of the human race for our superior knowledge and skill. But, unfortunately, in this nineteenth century the question is not as to the truth of an assertion, but whether it emanates from a recognized source of authority —and so every possible effort is put forth to become an "authority." It must also be recognized that the influence of so-called "authority" annually slays its millions of human beings; its pernicious effect upon human life in its individual and collective relations is felt in every clime. Yet, does any one really believe that we are so entirely unlike our fathers and grandfathers as to require diametrically opposite treatment to that which served their purpose? Surely the whole race cannot change in this essential particular every decade or so; and as regards a large number of diseases it is notorious the percentage of fatalities has not lessened, but with some, on the contrary—pneumonia, for instance—has rather increased. Is it rational to suppose that *seven* radical changes have taken place in the economy of the entire human race from 1800 to 1895? If not, then why such wondrous vacillation both in therapeutics and pathology? And now apparently we are upon the verge of another change that perhaps may result beneficially.

The future fad promises to be hæmoscopy, which inclines to regard the circulation as the source of disease and the medium through which it is to be arrested or eradicated. This, to be sure, will be a revamping of another branch of the old humoral pathology, and somewhat on the lines laid down by Saulsbury in the fifties, but it has the advantage of fitting into theories long ago advanced (and which were ruthlessly interrupted by so-called microbic pathology) and of being a logical sequel to well established discoveries.

Hayem discovered the third corpuscle as

long ago as 1878, terming it the hæmatoblast, and claiming that it constituted an anatomical element of normal blood and was a true cell. Recently Doctors Watkins, Holbrook and others have pointed out that the hæmatoblasts, or their accompanying platelets, are probably the first hæmatic indications of morbidity—claims that are further substantiated by Ephraim Cutter as the result of a long series of original researches. Even when all other symptoms may be absent it is claimed that the platelets evidence a depressed condition of the economy, inviting disease; it is possible also that the hæmatoblasts are natural material essential to the nutrition of bacilli. If this is true, the microbe will be speedily relegated to its proper place as a secondary factor in pathology, for, despite the claims made, careful pathologists long ago realized that germs are not the *fons et origo mali*, but *sequences* thereto.

Those who have watched medical progress must have recognized that until the development of the microbic fad the scope of pathological teaching was much wider and of broader conception than now obtains. Up to Cohnheim's death, pathological art was progressive; then morbid anatomy exclusively reached the ascendant, the fact being sedulously ignored that pathology does not deal with death merely, and that its real soul and essence is *Life!* Bacteriology, which is a sequence of morbid anatomy, carried the physician away from the dead-house to the laboratory, and it must be admitted it has been of some benefit in that it awakened a spirit of experimental inquiry. Bacteriology, however, is very far from being pathology, and even in so far as it applies to disease it is merely adjunctive, while beyond this it belongs to the *domain of botany!* While every bacteriologist should be a pathologist, and every pathologist possess an adequate knowledge of physiology as well as complete mastery over morbid anatomy, there is no step more to be reprobated than the present tendency to follow German and other Continental enthusiasts and become mere specialists in the art of growing bacteria and in immunization—in this respect Americans have certainly "out-Heroded Herod."

While we have no desire to convey the impression that morbid anatomy is not related to pathology—for, as it has ever been, it is still an important practical factor therein, alike from the student's, investigator's, and practitioner's point of view—this much must be insisted upon, namely: That the morbid physiology of the body and of disease has been too much neglected. Year after year has seen new text-books without number purporting to treat of pathology, that, barring a trifle of histology, are devoted exclusively to bacteriology; indeed, since the appearance of Cohnheim's classical work nothing has appeared of note that deals directly with diseases and their processes, and modern students of medicine do not realize what the term pathology means—it is the old story of giving a stone when bread is required. Many of these volumes also are merely annotated picture-books whose chief merit is—to use the words of Kanthack—that they "bring home to us in a painful manner the decline of pathological anatomy." Further, bacteriology has assumed such proportions that it endeavors to swamp everything else; in many institutions it is the only study that receives adequate or even notable attention. It is notorious that in the majority of German and American medical schools the chair of Pathology is occupied by a bacteriologist, and that even Hygiene is taught by the "germ-hunter." The result is that sound pathological anatomy has been crowded into obscurity and practically forgotten. The chief aim is to render everything subservient to the microbe, and seek contentment in that mediocrity which the cultivating and growing of germs opens to those incapable of doing real pathological work. "Bacteriology," to again quote Kanthack, "satisfies those who are devoid of capacity for original research, inasmuch as it may be practiced as a fireside game."

* *
*

In this connection it seems proper to refer to the latest fad in therapeutics, namely, serum therapy, announced a year ago with a great flourish; and yet, with the remembrance of tuberculin and other like fiascos, a large number of medical men have exhibited a commendable conservatism in regard thereto, while would-be "authorities" have rushed to the opposite extreme. It has been insisted

that towards diphtheria the serum is at all times as completely devoid of noxious or irritating properties as new milk, consequently if it did no good it would "do no harm." Then began the piling up of statistics—that mistress who bestows her favors upon the first comer—and, as is usual with forced evidence, these did not then, and cannot even now, bear the light of calm, impartial criticism. At first it was declared the average mortality from diphtheria had always reached eighty per cent., a statement laughed to scorn by men possessed of practical experience with the malady. Then the claimed ratio of fatalities began to decrease until the extreme was placed at twenty-five or possibly twenty per cent.—an average that is still recognized as excessive even for the days when diphtheria was a little-understood malady. Finally the promoters of the new therapy found themselves in a dilemma, inasmuch as "authority" declared this treatment assured a death ratio of just about twenty or twenty-five per cent., which was tantamount to a declaration that serum possessed no curative influence whatever.

Now came the information from a no less esteemed source than Doctor Lennox Brown, of London, that the serum was especially apt to exercise a deleterious effect on the kidneys, even to a fatal sequel—a report twice supplemented by the same author with new but equally definite evidence, and subsequently corroborated by scores of practitioners. In spite of all, however, under the morbid stimulus of those seeking notoriety and gazettes as "authority," this form of therapy has continued to fight its way with more or less claimed success up to the present date—in some localities it seems to have gained prestige, in others to have lost ground rapidly; and now twelve months after its introduction its true status is apparently as uncertain and ill-defined as on the day of its birth. Deaths attributable thereto, more or less circumstantially narrated, have appeared from various parts of the globe. The demise of a young girl in Brooklyn is laid directly to this agent, and the evidence adduced led the *New York Medical Journal*—which had previously exhibited a predilection in its favor—to assume an attitude decidedly conservative and verging closely on distrust. Like carrion crows, no sooner had the negative evidence been well disseminated than a multitude of similar unfavorable results were announced—until the more bold had appeared in print, these authors feared to encounter an abuse that was certain to follow those who were not in "the bacteriological swim." Gangrene, hæmorrhagic nephritis, interstitial nephritis, embolism, purpura, arthritis, and other phenomena of systemic intoxication, have been claimed to manifest themselves from the first to the fourteenth day after injection, by Drasche and Kassowitz of Vienna, Korte, Delthil, Hansemann and Furst of Berlin, Kohts of Strassburg, von Ranke of Munich, and others.

Doctor Joseph E. Winters, of New York, whose honesty is unassailable, as the result of daily clinical observation of nearly two hundred cases in the Willard Parker Hospital, before the New York Academy of Medicine declared he had "failed to see the slightest evidence of it having done good in a single instance;" further, that "horse serum dissolves the human blood-corpuscles, and therefore produces new elements of decomposition." Surgeon Cardeiro, U. S. Navy, originally favorably impressed with the serum, finally concludes: "We have not the slightest basis upon which to found an expectation that fewer children will die in the future of this disease on account of the serum treatment." These gentlemen are corroborated by Samuel Treat Armstrong, whose evidence is equally unassailable. Doctor Winters, moreover, openly charged, and sustained by evidence, that statistics have been juggled with and manipulated in the interests of serum therapy, and that cases which never had diphtheria were listed as recoveries under the use of this medicament. Those who have read Doctor Winters' monograph as published in the *New York Medical Journal* cannot but feel that an important factor has been overlooked in the consideration of serum treatment, and that is the globucidal power of alien serum on the blood of the animal or human being into which it is injected.—This fact was substantiated as far back as 1875 by Landois, who found the serum of the dog, the horse and the rabbit dissolved the red blood-globules of other species with great rapidity. Sterling, in his translation of Lan-

dois' Physiology, declares: "If the serum of one animal is transfused into the blood of another animal of different species, the blood-corpuscles of the recipient are dissolved, and if the change becomes general, death may occur," a conclusion identical with that of Darenberg.

Both Hayem and Lazet observed that small emboli were produced when the serum of the ox was injected into the circulation of dog or man, and the act further induced congestion of the kidneys and suppression of urine. In man the serum of the dog decomposed both red and white corpuscles, and solid concretions were formed from the débris. But all this is not new: it was well known and demonstrated again and again by Claude Bernard.

It is, however, unnecessary to cite the innumerable medical men who, in all parts of the United States, Canada, Great Britain, Germany, Belgium, Italy, and Sweden, have contributed evidence as to the scores of fatalities due to the so-called curative serum—their name is "Legion." Again, in the Montreal City Hospital, and in all the hospitals of Great Britain save one, the use of the medicament has been abandoned for cause, and this is equally true of a great many hospitals upon the Continent. At this writing the lay press announces that, before the Ontario Health Association—composed of the ablest medical talent in Canada, and which has just closed a successful session at Belleville,—the assertion was distinctly and emphatically made, and not contradicted, that "the alleged remedy is an utter failure."

Further, in the eagerness to uphold this form of therapy, it is charged—though with what measure of truth we are not able at this writing to determine—that in certain localities people suspected of exposure to diphtheria have been forcibly quarantined, detained, and injected, their cases being later tabulated as recoveries though there had never been any manifestation of any disease; the cases of tonsillitis that have been diagnosed diphtheria may be numbered by the thousand. It is notorious that in certain bacteriological laboratories every case submitted for test has been unhesitatingly diagnosed as diphtheria, though a large number of these were free from any malady whatever. As has been frequently pointed out, it is impossible to distinguish under the microscope the Klebs-Loeffler bacillus from certain other bacilli, neither can this organism be positively differentiated by cultivation; further, it is frequently present where there is no evidence of morbid process—it has even been found in the throat and on the fauces of patients two months after convalescence from diphtheria.

It is also claimed that individuals have been unduly hustled into contagion hospitals and subjected to all the annoyances that must necessarily result from such arbitrary and uncalled-for methods, including loss of time, injury to business, etc. If this is true it is evident that microbic pathology is becoming desperate; even if but a half-truth, such measures must have bred many cases of injustice that can only react against the medicament and its upholders. If serum therapy is possessed of any real practical value, it is certainly in great danger of being speedily smothered under the remembrance of the arbitrary measures adopted in its behalf and that are foreign to the candid sense of every individual, medical or lay, and equally foreign to the principles of law and good government.

Per contra, it must be said there still continues to accrue evidence in support of serum therapy, though the fact is generally ignored that its promoters persistently continue to employ and to advise the older and more classical modes of treatment.* As

---

*The following, excerpted by the *Medical News* from *Munchener Medicinische Wochenschrift*, is a characteristic report:

Fürth reports results obtained at the clinics at Freiburg in the treatment of 100 cases of diphtheria with the antitoxin. . . . . *In conjunction with the injection of the antitoxin other measures in usual employ at the clinics were not omitted. Thus, the air of the wards containing the severe cases was kept constantly moist by means of the steam-spray; local applications or insufflations of precipitated sulphur or of chinolinbenzyl rhodanate were made three or four times a day; children able to do so used potassium chlorate or potassium permanganate as a gargle, and inhaled frequently a solution of carbolic acid; an ice-collar was applied; bits of ice were swallowed when pain was present; and in cases of involvement of the nose, irrigation of the nares with antiseptic solutions was practiced.* Among the 100 cases thus treated there were *twelve deaths*. . . . . Thirty-one required tracheotomy. . . . . The opinion is expressed that antitoxin is *a specific in the treatment of diphtheria* with which no other therapeutic measure is to be compared.

has already been remarked in these columns, the value of any medicament as a therapeutic agent can be determined only by its exclusive use, and no claims are proper that are made in connection with an auxiliary treatment, for then the evidence most needed is that which is chiefly lacking. It must be remembered, moreover, that with few exceptions there is no disease which will in so brief a period manifest the extremes of malignity and of hastening convalescence as diphtheria; that there is no malady which in its characteristics will in so short a time develop such startling ranges of temperature, even from that which denotes impending dissolution down to a degree that positively guarantees convalescence. Indeed there is no disease (croup perhaps excepted) that permits its victims to appear in such perfect health for days and hours up to within a few moments of the time they are laid in their coffins—it is no uncommon experience to see a child running about the house and playing, and three hours later enveloped in a shroud.

One thing must be insisted upon, however, in behalf of serum therapy—that a large number of accidents accredited thereto are undoubtedly the results of imperfect methods of employment or improper selection of the agent; that much of the same sort of evidence that is cited against it is equally applicable in the reverse sense; and that those opposed thereto, in their desire to make good their cause, ignore the fact that some of the sequelæ laid at the door of serum therapy are apt to obtain to any severe case of diphtheria—albuminous urine and evidences of some form of nephritis. Doctor Clarence Arey recently pointed out in the *Medical News* the fact that all antitoxin serum, regardless of its manufactured source, is subject to deterioration by age—though this is sedulously ignored or denied by interested exploiters; and it is well known that purported serum was placed upon the American market practically coincidently with the announcement of its discovery, which alone ought to be sufficient evidence that it was quite a different material from that employed abroad and which required months for manufacture. Indeed, the exploiting of one medicament under this title has called forth the scathing criticism that "alleged barbarians poison their arrows with such materials as this."

Unfortunately there is no law to prevent the veriest knave from advertising and putting upon the market a false preparation, claiming for it all the advantages that accrue to the real—the advertising columns of our medical journals are full of such.

There are a number of serums in the market known to the initiated to be spurious; and yet so anomalous is the attitude of our government thereto, and so clumsy the workings of the law, that even mentioning their names while pointing out their false claims is to render one amenable to prosecution under the charge of "maliciously attempting to destroy a beneficial enterprise." The fact remains, however, that the status of serum therapy is far from being what its promotors desire; that, as already remarked, its real value—or its real uselessness for that matter—is yet to be determined. The final verdict, moreover, must come through the labors of honest and unbiased persons who will experiment with the medicament *per se* without adjunct remedies, and who will carefully collect and tabulate the results of an exhaustive series of clinical reports; there must be eliminated, moreover, "diphtheria waves" such as dominate different seasons. It is to be feared, however, that the promotors of serum therapy, in their anxiety to raise it upon the highest pedestal, have overreached themselves, and that the medical profession will not have the patience to give that examination which is necessary to determine its true character, and moreover will not accept without the gravest suspicion the results of even the most thorough trial, should such be made. The publication of evidence either *pro* or *con*, based upon a single case, or even a group of half a dozen cases, proves nothing; and this fact invalidates a large amount of evidence that has been advanced, both negative and positive. It is only by studying cases in series in an honest and upright way, both with and without serum, and in the same wards, with an earnest endeavor to learn "the truth, the whole truth, and nothing but the truth," regardless of the immediate results, that the medical profession can obtain such reliable data as shall for all time

secure its confidence and likewise determine the status of this (or any other) medicament.

Again, rural death statistics must be separated from the mortality rate in hospitals, since those seeking the aid of the latter are for the most part of the ill-fed, ill-nourished class—a class that offer conditions most favorable to the excessive virulence of any malady. There is something to be said, also, in favor of the assertion of a prominent Canadian practitioner, that after many years of experience he is inclined to doubt the value of any form of medication in diphtheria, and would be no way surprised if all remedial agents employed up to date should ultimately prove to be injurious—a statement echoed by a number of hearers. Another gentleman of equal prominence asserted he had lost no cases for a number of years—in fact, not since he abandoned all medication other than a teaspoonful of whiskey and water every one or two hours.

Whatever the real status of serum therapy, we must plead for more honesty in therapeutics, in clinical reports, and in statistics.

***

In the search for new remedies for malignant and wasting diseases, it would seem that the best practical results thus far have accrued to another agent, namely, the Nuclein derived from yeast, as recommended by Doctor Vaughan, which certainly, whatever its value may be, has succeeded in securing for itself a surprising amount of positive testimony. Perhaps one of the reasons why such satisfactory results have been obtained is that nuclein has been experimented with chiefly "upon its merits," and not as a result of assertions backed up by long tables of erroneous statistics which no one has either the time or wish to sift. Yeast or "barm," as an empirical remedy purely, in days gone by won for itself golden opinions in typhus, diphtheria, consumption, and other maladies; and now its nuclein derivative recommends itself in that its relations toward disease are apparently of a physiological character purely. But even nuclein is not without some few detractors, largely the result of misunderstanding. The editor of the *American Medico-Surgical Bulletin* classes it with antitoxin, and surmises "this agent and its physiological compounds behave like strong acids," whereas it is a well known fact that both nuclein and nucleinic acid are of the weakest acid character; he likewise essays a chemical formula ($C_{29}H_{49}N_9P_3O_{22}$), that is necessarily valueless, since such varies in accordance with the source whence the nuclein is obtained; it is, moreover, incorrect to consider albumen alone as the most important constituent of a living substance, the cell, since nuclein-albumen, nuclein, and nucleinic acid each play an equally important rôle. The readiness with which nucleinic acid combines with albuminous bodies, may explain its supposed properties, in part at least, for H. Kossel declares a one-half-per-cent. solution of nucleinic acid is capable of destroying in a very brief period of time the germs that accompany cholera, typhoid, and pyæmia. He further deems it highly probable that nucleinic acid is one of the substances which the economy has at its disposal for the express purpose of antagonizing alien organisms.

Neither is nuclein to be classed as a "purely artificial product of the analytic laboratory," as has been charged. Nuclein-albumen, from which nucleinic acid is derived, is a constituent of young living cells, whether of the animal or vegetable kingdom; thus we have nucleins as a component part of the cell nucleus. Again, true nuclein is insoluble in alcohol, and acid in reaction, quite different from the material that has led to adverse comment—there are so-called nucleins in the market which present characteristics diametrically opposite to those just outlined, but such are not entitled to the name and possess none of the attributes that belong to nuclein proper; in other words, any value that may be possessed by an alkaline nuclein, or markedly alcoholic nuclein solution, is that only which may be derived from any medicament through what in modern days is termed "suggestion." Neither can nuclein be in any way compared with alkaloidal substances that are employed hypodermatically: These latter are, so to speak, emergency products; are rarely used more than once or twice in any case, or at most not employed continuously for more than a few hours; are dissolved in small quantities of water, and injected in strong solution for immediate effect. *Per contra*, nuclein demands to be employed constantly and persistently in large

doses for long periods, and this too even in cases where the inherent resistance to infectious agents is at a minimum. It is evident, therefore, that this agent cannot be employed in the form of a hypodermatic tablet without danger to the integrity of the drug and detriment to the patient. To obtain the full value, it is positively demanded, then, that the nuclein solution be examined and tested: First, for its chemical reaction: Second, for the possible presence of an alcoholic constituent: Finally, the hypodermatic syringe employed must be especially reserved for this purpose alone, and constantly subjected to the most rigid antisepsis.

EDITORIAL NOTES.

Index Medicus.—

The list of subscribers to the special fund to date is as follows:

Chas. E. Sajous, M.D., Paris, France	$25 00
John B. Roberts, M.D., Philadelphia	25 00
E. E. Montgomery, M.D., Philadelphia	25 00
F. W. Henkel, M.D., Buffalo	25 00
Melvin Dewey (New York State Library), Albany	25 00
Chas. O'Donovan, M.D., Baltimore	25 00
Chas. Wood Fassett (Secretary American Medical Publishers' Association), St. Joseph, Mo.	25 00
D. W. Montgomery, M.D. (San Francisco Medical Society), San Francisco	25 00
S. W. Deland (Orleans Parish Medical Society), New Orleans, Louisiana	25 00
Fred. H. Wiggin, M.D., New York City	25 00
Medical Society Kings County (per W. Browning, M.D.), Brooklyn, N. Y.	25 00
Total	$275 00

The editors of the *Index Medicus*, Doctors John S. Billings and Robert E. Fletcher, are also receiving subscriptions—a blank for which will be found in our advertising columns—and likewise sending out the following circular:

DEAR DOCTOR: It has been decided to make an attempt to revive the *Index Medicus*, and to continue its publication for at least five years. For this purpose 200 subscriptions at $25 00 each are required. We enclose a form of subscription which is self-explanatory.

If revived, the *Index Medicus* will have no exchanges and no advertisements, and will be a rare work. If you are interested in the matter, will you try to obtain subscriptions from some of the libraries in your vicinity? A list of those subscribing will be published in October. Hoping to hear from you on this subject, we remain,

Very truly yours.

Washington, D. C.

Synthetic Caffeine.—

This chemical problem has apparently been solved by E. Fisher and D. Arch, who claim to have secured a true product. It is fortunate, perhaps, that the synthetic salt can as yet be produced only at a cost considerably greater than that of the natural and vegetable alkaloid; and while the result may be of scientific importance, we fail to see where or how it can be of practical value; synthetic caffeine certainly is not needed as an addition to either therapeutics or materia medica.

Apomorphine versus Tobacco.—

Doctor Waugh recently heralded Apomorphine as a specific for the tobacco habit, giving in doses to the point of slight nausea. The weed, he says, "will get very rank about the time nausea begins to be felt."

This is not according to our experience. On the contrary, many devotees to nicotine find a chew of tobacco effectually quells and overcomes slight nausea, whether due to apomorphine or other cause.

Brief Wisdom.—

The theory of medicine has been cultivated until the practice is lost in a nebulous haze. The object of medicine is to cure disease, not to ascertain, experimentally, how much the human organism will endure before it succumbs, nor to pervert facts for purposes of self-glorification or self-advancement.

Acknowledgment.—

The editor of THE MEDICAL AGE acknowledges an invitation to be present at the seventh annual convocation of the Tri-State Medical Society of Alabama, Georgia, and Tennessee, at Chattanooga, October 8th, 9th, and 10th. An attractive programme is promised.

Cold in Pneumonia.—

Doctor Thos. J. Mays records seventy-four cases of congestion of lungs treated with ice-cold applications, with only two deaths. This is certainly suggestive.

Items and News.

Necessity of Frequent Visits.—

The Supreme Court of California (Todd *v.* Myers, 40 Cal., 355), in an action brought by a physician for professional services — the defense being that the visits were too frequent and not necessary—rules that:

> The defendant having admitted the employment of the plaintiff as a physician to treat his wife and children, the plaintiff was the proper judge of the necessity of frequent visits, and in the absence of proof to the contrary the court will presume that all the professional visits made were deemed necessary and were properly made.

It would be a dangerous doctrine for the sick to require a physician to be able to prove the necessity of each visit before he can recover for services. This is necessarily a matter of judgment, and one concerning which no one save the attending physician can decide. It depends not only upon the condition of the patient, but in some degree upon the course of treatment adopted.—*The Sanitarian.*

Neurasthenia.—

The modern tendency to attribute ill-health to nerve weakness is shown by the rapid increase in alleged nerve bracers. Patent medicines and medicines which are not patented flood the markets, all claiming to furnish nerve food or nerve stimulant. Some of them are helpful, others are worse than useless. Give the nerves a fair show and they will get on without these aids. Live rationally, work rationally, play rationally, and the nerves will take care of themselves. Run the physical machinery beyond its capacity, or abuse it in any way, and the nerves will sound the warning. When they do, do not give them something to silence them, as one might a fretful child, but heed the warning and mend your ways of living or working.—*Exchange.*

A Unique Prescription.—

A gentleman in Virginia, exerting himself one day, felt a sudden pain, and, fearing some internal injury, sent for a negro who made pretensions to medical skill. The negro, having sagely investigated the case, prepared and administered a dose with the utmost confidence of speedy cure. No relief being obtained, however, a physician was sent for, who inquired of the negro what he had given. "Rosin and alum, sir!" "What did you give them for?" continued the doctor. "Why," replied Sambo, "de alum to draw de parts togedder, and de rosin to sodder 'em."—*Healthy Home.*

An Interesting Experiment.—

Doctor Schleich, of Berlin, recently gave an interesting demonstration at the Sydney (New South Wales) Hospital. He induced local anæsthesia by the injection of a saline solution into the tissues surrounding the part to be operated upon. The theory is that the pressure of the fluid paralyzes the nerve extremities, and therefore removes all chance of pain. The demonstration was altogether satisfactory, both to the patients operated upon and to the attending surgeons.—*Australian Journal of Pharmacy.*

Negroes and Phthisis.—

During the slavery days, physicians used to say that the African race did not have consumption. Since 1865, however, this malady has become very common, and during ten years I do not remember to have been without a case among the colored people; it is more common among them than among the whites, and appears to be of the acute variety. Tubercular negroes seldom last longer than six months.—Doctor J. Atkinson, in *Medical World.*

Shall We Deserve This Epithet?—

The Medical Cuckoo is the American physician that rushes to the public to proclaim to the world the "infallible" value of every sensational fad sprung in a foreign country. When will American physicians (and American girls) overcome their sensational, mawkish yearning for exotic oddities? Let's be original; we have the brains in America.—*North American Medical Review.*

Science.—

Do you believe that science consists in a long-winded, pointless argument written to show how much one knows about something that "ain't so?"—*Medical Brief.*

Headache of Pregnancy.—

This symptom should always be regarded with suspicion. It is frequently evidence of uræmia and threatening eclampsia.—*New York Medical Times.*

Worthy of Consideration.—

Doctor Gould suggests the use of the prefixes *dui*, *tri*, *quadri*, *quinti*, *sexti*, before the word para, to designate the numerical position of a multi-para.

A Free Translation.—

Sir William Gull was wont to say the true translation of the Greek proverb "Know thyself," was "Test your urine."—*Medical Times.*

Book Reviews.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 per year. D. Appleton & Co., New York.

Contents for August: "Professional Institutions," by Herbert Spencer; "New Chapters in the Warfare of Science," by A. D. White; "The Physical Element in Education," by E. L. Richards; "Apparatus for Extinguishing Fires," by John G. Morse; "The Motive for Scientific Research," by Hubert L. Clark; "Pleasures of the Telescope," by Garrett P. Serviss; "Argon," by Doctor John T. Stoddard; "The Nervous System, and its Relation to Education," by John Ferguson, M.D.; "The Work of Ideas in Human Evolution," by Gustave Le Bon; "Editor's Table," "Literary Notices," "Popular Miscellany," "Notes."

The principal features in the September issue are: The completion of the paper on "Apparatus for Extinguishing Fires," by John G. Morse; "The Closing Struggle in the Advance of the Higher Criticism," by Doctor Andrew D. White—this period embraces the labors and persecution of Bishop Colenso, Theodore Parker, and Ernest Renan; under the title of "Primitive Egoism" the question of whether a child is naturally moral or immoral is taken up by Professor James Sully; "The Biographer, Historian, and Litterateur" is by Herbert Spencer, who shows that these professions are derived from the functions of the primitive priest.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The August issue contains: "The Pastels of Edwin A. Abbey," by F. H. Smith; "The Wheel of Love," chapters I–VI, by Anthony Hope; "Wood-engravers," by A. Leveille; "Our Aromatic Uncle," by H. C. Bunner; "Miss Delamar's Understudy," by Richard H. Davis; "Summer Song," by Duncan Campbell Scott; "Lights and Shadows," by Benjamin P. Blood; "The Rector's Hat," by Noah Brooks; "The Guard-House Lawyer," by George I. Putnam; "The Scab," by Octave Thanet; "A Ruined Faith Doctor," by Charles R. Van Blarcom; "Six Years of Civil Service Reform," by Theodore Roosevelt; and "The Amazing Marriage," chapters XXIX–XXX, by George Meredith.

THE CENTURY. Price, 35 cents; $4.00 per year. The Century Co., New York.

The principal contents of the Midsummer Holiday number are: "Peter Paul Rubens," by Timothy Cole; "The Princess Sonia" (IV), by Julia Magruder; "Halcyone," by John V. Cheney; "Life of Napoleon Bonaparte," by W. M. Sloane; "Sonya Kovalevsky," by Isabel F. Hapgood; "The Rivalries of Long and Short Codiac," by George W. Edwards; "The Cat and the Cherub," by Chester B. Fernald; "The Battle of the Yalu," by Philo N. McGiffin; "Lessons from the Yalu Fight," by Alfred T. Mahan; "Casa Braccio" (X), by F. Marion Crawford; "Fox-hunting in Kentucky;" and the usual "Topics of the Time," "Open Letters," etc.

THE COSMOPOLITAN. Price, 10 cents; $1.00 a year. Cosmopolitan Publishing Co., Irvington-on-Hudson.

Not since "The Anglomaniacs" has there appeared so clever a society satire as Henry Fuller's "Pilgrim Sons," which is published in the August issue. The problems involved in woman's use of the bicycle are discussed by Mrs. Reginald de Koven. A new and thrilling sport is exploited in an article on "Photographing Big Game in the Rocky Mountains," before shooting. There are also contributions by Sir Lewis Morris, Sir Edwin Arnold, Edgar Fawcett, Tab, W. Clark Russell, Lang, Sarcey, Zangwill, Agnes Repplier, etc. The illustrations are by Hamilton Gibson, Denman, Van Shaick, Lix, Sandham, and others.

THE NORTH AMERICAN REVIEW. Price, 50 cents; $5.00 a year. Edited by Lloyd Bryce, New York.

The August issue opens with a paper on "The Menace of Romanism," by W. J. H. Traynor; Major Griffiths writes of "Female Criminals;" Andrew Lang of "'Tendencies' in Fiction;" "The Solution of the Problem of War" is considered by Rabbi H. Mendes; a specially seasonable paper is "What to Avoid in Cycling," by Sir Benjamin Ward Richardson; "The New Administration in England" is by Sir Charles Dilke; Albert D. Vandam's eighth installment of "Personal History of the Second Empire" deals with the prosperity and social splendor of that epoch; "Guesses at the Riddle of Existence" is by Goldwin Smith.

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards & Docker Co., Philadelphia.

Contents for August: "Investigations concerning the Ætiology of Smallpox," by J. Christian Bay; "The Affinities of the Lepidopterous Wing," by Vernon L. Kellogg; "On the Presence of Fluorine as a Test for

the Fossilization of Animal Bones" (continued), by Thomas Wilson; "Contributions to Coccidology," by T. D. A. Cockerell. There are the usual departments of Mineralogy, Petrography, Geology and Paleontology, Botany, Vegetable Physiology, Zoölogy, Entomology, Embryology, Psychology, Anthropology, Scientific News, etc.

THE ECLECTIC. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The principal articles for August are: "The Debrutalization of Man," by Blanche Leppington; "The Collapse of Socialism," by Walter Lloyd; "Tommyrotics," by Hugh E. M. Stutfield; "Some American 'Impressions' and 'Comparisons,'" by Elizabeth L. Banks; "Cuckoo Corner," by Maria Edgeworth; "Two Great Shikaris;" "On Undesirable Information," by E. F. Benson; "Recent Science," by Prince Kropotkin; "The Morning Star;" "Vignettes from Nature," by Richard Jefferies. Besides, there are one or two short stories, and the usual Foreign Literary Notes and Miscellany.

OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Publishing Co., San Francisco.

The August issue contains: "A Modern Centaur," by H. Ansot; "Resignation," by Robert L. Davis; "What Indiana Has Done for California," by J. A. Woodson; "Santa Barbara," by Rutbella S. Bollard; "Well Worn Trails," chapter II, by Rounsvelle Wildman; "Circe," by Philip Becker Goetz; "True Tales of the Old West," chapter VIII, by Batterman Lindsay; "The Quicksands of Pactolus," by Horace A. Vachell; "The Legal Lore of Forty-nine," by E. L. Keyes.

REVIEW OF REVIEWS. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The special features of the August issue are the character sketches of "Theodore Roosevelt;" "The Clearing of Mulberry Bend"—the story of the rise and fall of a typical New York slum; "The Third Salisbury Cabinet;" and the "Record of the Rosebery Administration." There are the usual regular departments devoted to Progress of the World, Record of Recent Events, International Cartoons, Reviews, Contents of Periodicals, etc.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

Contents of the August number: "Bigamy under the Canadian Code," by Richard J. Wicksteed; "Experiences in the Canadian Northwest," by G. M. Standing; "Reminiscences of Bench and Bar," by C. A. Durand; "Ontario Petroleum and its Products," by L. Clayton Campbell; "A Potlach Dance," by David Owen Lewis; "The New English Ministry," by Thomas E. Champion; "From the Jaws of Death," by R. F. Dixon; "Through Okanagan and Kootenay," by Constance Lindsay; "In 1812"—an incident unrecorded in history,—by Stuart Livingston.

THE PETERSON MAGAZINE. Price, 10 cents; $1.00 a year. Penfield Bros., New York.

Contents for August: "George Washington" (third installment), by T. J. Mackey; "Confession of a Smuggler," Anon.; "Henrik Ibsen," by K. Monck; "A Symphony in a Flat," by Mary Bell; "The Little Millionaire," by Margaret Livingston; "A Dish of Tea," by Abbie F. Brown; "French Art at the Paris Salon," by Rupert Hughes; "Among the Sioux Indians with a Camera," by Herbert S. Ardell.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

"The Jesuits and the Republic," by Michael J. Dwyer, appears in the August issue. There are also papers by Thomas J. Feeney and Edward Gerard, entitled, respectively, "Glimpses of Gettysburg" and "From Quebec to Chicoutimi." The "Martyrs of Memphis" is by George Barton; "The British House of Commons," by P. O'Neill Larkin; "Footprints of the Irish Soldier," by C. S. O'Neill.

THE ROYAL NATURAL HISTORY. Edited by Richard Lydecker, B.A., F.R.S., F.Z.S. Volume I, Part 3. Paper; royal 8vo; pp. 96. Price, 50 cents. Frederick Warne & Co., New York.

The June number presents two elegant colored plates, one of a tigress and young, the other of fruit bats. The chapter on Marmosets, begun in the previous number, is concluded with descriptions of the pigmy and black-tailed marmosets, and also those belonging to the genus Midas, viz.: Negro tamarin, red-handed tamarin, brown-handed tamarin, moustached tamarin, pinché, and the silky marmoset.

Chapter VII deals with the Lemurs, their habits, distribution, differentiation, etc. This comprises the false lemurs of the genera Indris, Propithecus or Sifaka, and Avahais; then follow the true lemurs, to which some forty pages are devoted, embodying the following genera: Lemur, Hapalemur, Lepido-

lemur, Chirogaleous, Galago, Loris, Nycticebus, Perodicticus, and finally the fossil lemurs.

Chapter VIII is devoted exclusively to those anomalies whose classification has not yet been satisfactorily determined, but who appear to greatly resemble the Lemuridæ, viz., the tarsier and the aye-aye.

Chapter IX deals with the Chiroptera or Bats. First come the fruit bats of the genus Pteropididæ; next the fox bats Pteropus and Xantharpygia; Epomophoru, Cynopterus, Harpyia, Pteralopex, and Carponycteris.

Chapter X is devoted to the insect-eating bats, Microchiroptera; horseshoe and leaf-nosed bats, Rhinolophidæ; vampires, Nycteridæ; and the common bats, Vespertilionidæ.

Too much praise cannot be given this work, inasmuch as both text and illustrations—the latter most profuse and usually life-pictures—are complete.

A System of Surgery. By Frederick S. Dennis, M.D., and John S. Billings, M.D. Volume II. Cloth; 8vo; pp. 926. Price, $6.00. Lea Brothers & Company, Philadelphia.

Doctor Henry R. Wharton writes upon "Minor Surgery;" George R. Fowler upon "Plastic Surgery;" William H. Forwood on "Military Surgery and Care of the Wounded on the Battle-field;" Nicholas Senn of "Diseases of the Bones;" Virgil P. Gibney of "Orthopædic Surgery;" Lewis A. Simpson of "Aneurysm;" Fred. S. Dennis of "Surgery of Arteries and Veins;" Fred. H. Gerrish of the "Lymphatic System;" Roswell Park of "Diseases and Injuries of the Head;" W. Keen of "Surgery of the Spine;" John B. Roberts of "Surgery of the Nerves."

This volume is a fit companion to Volume I, and like the latter is most complete in all details, while the illustrations in both are far superior to those that generally appear in works of this kind,—both woodcuts and colored plates are of the very highest type, and the majority are new, having been expressly prepared for this work. This latest "System of Surgery" is by long odds the best that has been issued from the press in many years.

Obstetric Surgery. By Egbert H. Grandin and George W. Jarnan, M.D. Cloth; 8vo; pp. 220. Price, $2.50. The F. A. Davis Co., Philadelphia.

Most works on obstetrics relate to the entire subject of parturient women; this therefore is something of a departure in that it deals only with surgical obstetrics. The volume is graphic in style and discusses in regular order such topics as obstetric asepsis and antisepsis; obstetric dystocia and its determination; artificial abortion and the induction of premature labor; the use of forceps; version; symphysiotomy, the Cæsarean operation, embryotomy, ectopic gestation, etc. As to the surgical methods recommended, they represent the judgment of a majority of practitioners of the profession.

A Laboratory Guide for the Dissection of the Cat. By Frederic P. Gorham, A.M., and Ralph W. Tower, A.M. Cloth; 8vo; pp. 87. Price, $1.00. Charles Scribner's Sons, New York.

This volume is intended as a preliminary to the study of anatomy, and supplies a needed introduction to methods and terminology; its correctness is vouched for by Professor Bumpus, Professor of Comparative Anatomy in Brown University. The chapters deal respectively with the Skeleton, Viscera, Muscles, Vascular System, and Eye. The value of the work to those beginning the study of comparative anatomy or veterinary medicine is incalculable.

The Care of the Baby. By J. P. Crozer Griffith, M.D. Cloth; 12mo; pp. 392. Price, $1.50. W. B. Saunders, Philadelphia.

This book claims to be a manual for mothers and nurses, and gives evidence of considerable painstaking on the part of the author. Nevertheless we can but deprecate the publication of such works, since, while such advice is all well enough in a general way, when it is supplemented by condensed ætiological and pathological information with set formulas in the way of therapeusis, it becomes pernicious, and tends to most dangerous domestic quackery.

Gout and its Cure. By J. Compton Burnett, M.D. Cloth; 32mo; pp. 172. Price, 95 cents. Boericke & Tafel, Philadelphia.

Doctor Burnett has earned considerable reputation in the treatment of the gouty, and this little work fully exemplifies his ideas both as to management and pathology. He justly remarks that to attain success it is necessary to have a clear idea of what constitutes the various parts of gout, and also differentiate between its pre-deposit and post-deposit symptoms.

The Sympathetic Nerve. By Byron Robinson. Price, 75 cents. Chicago: E. H. Colgrove & Co.

This is a life-size drawing of the sympathetic nerve, and is the result of five years' labor in dissecting. The representation is as close to nature as science and art are capable of reproducing.

Therapeutic Brevities.

Abuse of Opium.—Our text-books recommend opium in almost all diseases as a cure-all. In painful maladies the sufferer demands prompt relief, and as opium is the long-used and abused analgesic it is the first agent suggested to the anxious sympathetic physician; hence its almost constant use in daily practice. Then, in epidemic visitations, where the physician is overrun with professional engagements, he is often led to give an opiate to quiet his patient so that he may get greatly needed rest; but it is well known that this drug is rarely curative in any disease, and often does great harm, as it locks up most of the secretions, and in many cases tends to congestion of the brain. And the oft-repeated use of the drug is productive of one of the most degrading habits known. The practice of giving opiates for coughs has an evil tendency, as opium, in any form, locks up the excretions, thus retaining detritus in the air-passages, greatly to the patient's detriment. Ammonium chloride is a much better and safer remedy in coughs. The headaches for which opiates are often taken can be readily relieved by acetanilid. Gastralgia may be relieved by hydrocyanic acid alternated with sub-carbonate of bismuth, and, if of a colicky character, will yield to peppermint.—Doctor I. J. M. Goss, in *Courier of Medicine.*

Aromatic Mouth-Wash.—Half a teaspoonful of the following, in a wineglass of water, will be found a valuable agent in cleansing and preserving the teeth and gums, and sweetening the breath:

	Parts.
℞ Tincture pyrethrum	1½
Tincture cinnamon (true)	4
Tincture cloves	6
Tincture benzoin (simple)	4
Tincture angelica root	4
Tincture abelmusk seeds	4
Tincture coriander	8
Tincture pimento	9
Tincture musk (24 grains to oz.)	1
Tincture anise	1
Extract rose	4
Essence ambergris	1
Essence peppermint (1 to 32)	1
Spirits chloroform	10
Alcohol	30

Mix, filter, and label "*Eau Aromatique.*"

—*British Journal of Dental Science.*

Amyl Nitrite in Syncope.—Those who meet with threatened cardiac syncope during operations should rely upon the immediate use of Amyl nitrite. Artificial respiration practiced simultaneously helps the entrance of Amyl into the system. All other methods of treatment should be secondary, since such require more time and more assistance from others. In the case of a young woman with valvular heart disease to whom I reluctantly administered chloroform, the breathing suddenly became shallow; the face dusky; the pulse a mere thread, and it even seemed to disappear for many seconds. The operation was stopped and Amyl nitrite instantly employed; and as soon as it entered the system by means of the still feeble respiration, the pulse rapidly returned and became strong again.—Doctor W. M. Killen, in *British Journal of Dental Science.*

Influence of Syphilis on Tabes Dorsalis.—Possibly a third of the cases of locomotor ataxia may be of syphilitic origin. This malady, when it appears twenty or thirty years after primary syphilis, and is not preceded by any decided syphilitic manifestation during this interval, is probably not syphilitic. So-called syphilitic ataxia has no definite characteristics of its own, such as belong to cerebral syphilis, and antisyphilitic treatment as a rule does more harm than good; in any case in which this form of treatment does no good in fifteen to twenty days, I believe it useless to persevere with it. On the whole, I surmise the importance of syphilis as a cause of tabes has been greatly exaggerated.—Doctor Cardarelli, in *British Medical Journal.*

Codeine.—This is my favorite medicament for pains in the stomach and alimentary canal generally, also in kidneys, bladder and other hollow organs. It is a prime remedy where the ganglionic system of nerves is involved, even if the heart is the seat of the trouble. Gelsemium and Codeine work admirably well together. Recently I treated a case of uterine and sympathetic bladder trouble successfully with this combination; the symptoms were pain, frequent and scanty passages of urine, and inability to rest or sleep; patient was worn out with the constant strain upon her. The combination afforded prompt relief. — Doctor Joseph Adolphus, in *American Medical Journal.*

Chronic Catarrh of Respiratory Mucous Tract.—Chekan seems particularly adapted to those conditions following acute inflammation of the air-passages, which take on the character and symptoms, except the eleva-

tion of temperature, of phthisis pulmonalis in younger subjects. I usually prescribe the fluid extract in half-drachm doses, from four to eight times a day, in a little simple syrup or the fluid extract of liquorice. It is especially beneficial in purulent bronchitis, and I have found it to act nicely in all chronic coughs, particularly when the bronchial passages *only* were involved. I would not use it in phthisis pulmonalis.—Doctor W. C. Manley, in *Chicago Medical Times.*

Cream of Tartar in Gonorrhœa.—I have employed Cream of Tartar in 280 cases of gonorrhœa. On account of its mild action it is of service in urethral injections, even to five a day; it subdues the inflammation, arrests the discharge, and is possessed of eminent antiseptic and absorbent properties. In profuse suppuration in wounds or cavities with necrosing walls it will yield good results if applied locally. In buboes, chancres, and syphilitic ulcerations, as well as in balanitis, it is a good local application. Finally it is cheap, devoid of odor, painless, and easily handled.—Doctor Oteri, in *Journal de Médecine de Paris.*

Epilepsy.—After an experience of twenty-one years, I regard Ammonium muriate as a specific for all forms of epilepsy not arising from traumatism. I employ the granulated salt, filling a half-pint bottle half-full, completing the filling with water, and prescribe for an adult a tablespoonful every three hours. I give to both children and adults all the stomach will bear, prescribing oftentimes in connection with elm-tea, mint-water, or gum arabic. I aim to so saturate the system with the salt that the perspiration will yield it plentifully.—Doctor H. J. Coon, in *Medical World.*

Uterine Affections.—Cornutine citrate, an alkaloid of ergot, is a brownish amorphous powder, readily soluble in water; Lewitzky regards it as one of the most certain means of exciting uterine contractions. Meisel finds it useful in urethral, vesical, and uterine hæmorrhage.

℞ Cornutine, 0.08 gramme.
Kaolin, 3 grammes.
Distilled water and glycerin, to make mass.

Divide into 20 pills. Take two, three times daily.

—*American Medico-Surgical Bulletin.*

Strychnine in Snake-bite.—The fallacy of the employment of strychnine as an antidote to snake-poisoning has been fully established in India by Surgeon-Lieutenant Elliot, who reported the results of his experiments before the South Indian Branch of the British Medical Association. He and all those who spoke at the discussion of the paper agreed that strychnine was calculated to be extremely dangerous, and only to add further agony to the unfortunate patient without affording any relief.—*British Medical Journal.*

Plantago in Toothache.—It is not too much to say that about seventy per cent. of the cases of toothache that come under our notice may be successfully treated by Plantago, while a goodly number of the remaining thirty per cent. may be greatly relieved and benefited thereby. Preferably should be employed the tincture made from the whole plant, administering in from one-drop to three-drop doses every half-hour for one or two hours, increasing the intervals as pain decreases.—*Homœopathic World.*

Chloasma.—Try the following for moth patches (so called):

℞ Ammonium chloride, 1 drachm.
Acid hydrochloric, 1½ drachms.
Glycerin, 7 drachms.
Tincture benzoin, 2½ drachms.
Rose-water, 3 ounces.

Mix, shake well. Apply night and morning with a brush or feather.

It worked very well in a distressingly marked face for one of my patients.—Doctor Brodnax, in *Medical Summary.*

Constipation.—Contraction of the external sphincter muscle has much to do in producing constipation. If there is fissure, the muscle is spasmodically contracted. Frequently there is contraction from other causes. If there is found a tight sphincter in constipation, as is very often the case, much is to be gained by divulsion or stretching. Often when divulsion has been performed for some disease of the rectum, the constipation has been cured also.—*Louisville Medical Monthly.*

Asphyxia from Illuminating Gas.—A hypodermatic injection of Nitro-glycerin, one-hundredth of a grain, is said to speedily relieve.—*National Medical Review.*

[This treatment would probably be equally effective in poisoning from charcoal fumes or natural gas. The remedy has the merit of being physiological, at all events.—Ed.]

How to Employ Empty Capsules.—It should be borne in mind, in employing empty capsules, that the advantages of these convenient aids to medicine are in a large measure lost when the contents are made in the form of a bolus or pill mass with excipients, or when the capsule is packed tightly. In selecting a capsule for the administration of powders, etc., it is always desirable to choose a large size in order that the contained medicine shall be in as loose form as possible.

Typhoid Fever.—Keep the patient in bed until for an entire week the temperature has been normal, and feed him exclusively on sterilized liquid diet as long as he remains on his back:

At the beginning of the disease give ten grains of calomel on alternate days:

Give one grain of carbolic acid and three drops of tincture of iodine, every four hours, during the entire illness.—Doctor Gustavus Elliot, in *Yale Medical Journal.*

Passiflora for Odontalgia.—Recently a patient came to me suffering intensely with toothache, and appealed for relief, if possible, without extraction. Passiflora suggested itself as being a possible soporific, so I saturated a pledget of cotton and filled the cavity of the tooth, with the result of almost instantaneous relief. Since that time I have made numerous like experiments with the same absolute results.—Doctor Spees, in *Georgia Eclectic.*

Silk versus Catgut.—Kocher, of Verne, uses antiseptic silk sutures exclusively, having abandoned catgut seven years ago. In 471 operations for goitre, silk was used, and eighty-five per cent. healed by first intention; while in 108 cases in which catgut was used, suppuration occurred in fifty-three per cent. Lauenstein recently collected samples of catgut from different manufacturers, and out of 106 specimens found twenty of dangerous character.—*Times and Register.*

Carbolic Acid in Gonorrhœa.—One drop of Phenic acid duly diluted, and ingested three times daily—gradually increasing the dose of acid to three minims,—and an injection of ten grains to the ounce of water, affords most excellent results. Indeed, I have cured cases without any resort to this or any other injection, in from eight to fourteen days.—Doctor Benj. Brodnax, in *Cincinnati Medical Journal.*

"Toadstool" and "Mushroom" Poisoning.—It is not unlikely that some of the deaths ascribed to the eating of poisonous fungi may have been really caused by varieties naturally edible, but rendered poisonous by being grown on manure heaps of miscellaneous filth, which supply to it not only the richest nourishment but also poisonous exhalations, which the arrangement of its "cap" permits it very readily and effectually to absorb.—*The Lancet* (London).

Hay Fever.—One teaspoonful of Syrup Hydriodic Acid (P., D. & Co.'s) every two hours in water, will sometimes arrest an attack of this distressing malady within twenty-four hours.—*Richmond Journal of Practice.*

[This is practically the "iodide treatment," and offers great advantage over iodide of potassium in that it is less likely to disturb the stomach.—Ed.]

Chorea.—Put the patient to bed, regulate the diet carefully, prohibit all stimulants, including tea and coffee, and give Fowler's Solution in ascending doses to the point of toleration. In addition it is well to accustom the patient to a series of systematic exercises, such as will tend to give control of coördinate movements.—*Journal of Materia Medica.*

Cotton-root as a Hæmostatic.—Cotton-root bark is a reliable and harmless hæmostatic, is available in metrorrhagia, hæmoptysis, hæmaturia, and epistaxis. It may be given in doses of twenty to thirty minims of fluid extract for several days. There are no disturbances of digestive organs.—Doctor Markevitsch, in *Medical Standard.*

Spermatorrhœa.—

℞ Cornutine citrate, ¼ grain.
Kaolin, 100 grains.
Tragacanth mucilage, to make mass.

Make 50 pills: One to be taken morning and evening.

—*American Medico-Surgical Bulletin.*

Saw Palmetto in Pelvic Diseases.—*Sabal serrulata* is a good remedy in pelvic congestion, if employed in doses of ten drops every two hours. It secures successful results in peritonitis, even when the disease is complicated with cellulitis.—Professor Elbridge C. Price, in *American Homœopathist.*

Medical Progress.

MEDICINE IN CHINA.—Medicine as practiced by the Chinese is in a deplorable condition. Very few Chinese medicoes ever know anything of the Ts'o-pun, an old Chinese Materia Medica; the majority merely know how to write out a few old stock prescriptions copied out of some antiquated document that came down to the family as an heirloom. A man engaged in the Kiangnan Arsenal as a petty overseer, on being dismissed from his post, stole some secret prescriptions from a Buddhist priest and then hung out a sign informing the public that he was ready to guarantee a perfect cure for any ailment.

In the district of Ching-poo there are two villages, Mang-ho and Tsung-ko—each having a family of doctors, celebrated all over China, and during an illness of the Empress-Dowager one of them was called to Peking, but Her Majesty, fortunately or unfortunately, did not ask him to prescribe. The patients that go to these places are either hypochondriacs or incurables, and I have never seen one that had either functional or organic disease who returned cured.

One sometimes hears of the Imperial College of Medicine in Peking, and a foreigner is sure to make an egregious mistake, supposing it is some institution like the Royal College of Physicians and Surgeons in the West. It is only a handful of self-styled doctors who have no lectures to give, and do not write articles for medical journals, as there are no readers; a Chinese medical student in the proper sense of the term has never existed.

The Chinese apothecary does a large business, for the doctors prescribe large bowlfuls of decoctions for every complaint; consequently he must have a large supply of herbs and roots to meet the demand, and so ransacks creation for odds and ends. Of the drugs one may have some idea by reading the following advertisement:

Recently Hongkong and the provinces of Kwangtung being visited by the plague the Provincial High Authorities have published a prescription called Plague Cure which is infallible. Our shop has already prepared this medicine for the two great benevolent institutions in Canton, where it has been used with invariable success. In this prescription there is one ingredient called Son of Stone Dragon, which is found in the mountains in the province of Chekiang. Through the agency of our branch office in Hangchow we have obtained a superior variety of this stony son of a Dragon, and together with other valuable drugs we have made this mixture. During the compounding, we have reverently said a thousand prayers. Now we offer this medicine to the public. Herewith is an illustration of this stony son of a dragon as our trademark. The medicine is not only unusually effective against the plague, but it is also infallible against different kinds of cholera, vomiting, diarrhœa, colic, apoplexy, sunstroke, asphyxia, typhus and typhoid fevers, ague, diphtheria, liver and stomach aches, tetanus in children, surfeiting, smallpox, poison, malaria, all sorts of tumors and inflammatory poisons, etc., etc. Shanghai being particular in its sanitation against plague, we have specially prepared this medicine as a valuable weapon in the hands of committees for preventive measures.

CHEN-FUH-LAN-TANG.

I wonder who discovered such potent virtues in a little lizard, which in its native province of Chekiang is always regarded with disfavor.

For various female complaints and diseases "Dragon" and "Phœnix" pills are largely sold, coated with wax, either white or yellow, and of the size of an English walnut; their efficacy is of course lauded to the skies; no doubt they are composed of such drugs as aloes, myrrh, etc. The Chinese druggists, in their anxiety to make money, also advertise drugs to restore the virile power in a profligate, and cause the sterile to bear offspring.*

But there are stuffs which the Chinese druggists do conscientiously collect, with much expense and labor, but which are nevertheless inert and useless—as tigers' bones, bears' paws, deer's horns, etc. Tigers' bones are ground into powder and used in plasters for internal injuries; bears' paws are boiled to a jelly and used as a powerful alterative for the weak and aged; deer's horns are sawn into thin discs, boiled down, and given to renew wasted vitality.—A young horn is considered as particularly valuable when it is a little ruddy and somewhat translucent.

When every available drug has been pressed into service and found wanting, the Chinaman resorts to superstition, or, if I may be pardoned, to a "faith cure!"—for humanity is much the same the world over. But the great danger is, that they often resort to the fetich first and neglect a rational medication. Unfortunately also superstition often retains its victims long in its thraldom, but sometimes it gives a sort of pleasant rounding to the recovery of an important member of a family—as, for instance, when a father gets well from severe illness because his filial son cuts a piece from his arm and embodies it in the prescribed remedy. Every year the *Peking Gazette* gravely makes honorable mention of filial sons and dutiful daughters-in-law who have maimed themselves in loving devotion to parents.

*Some civilized druggists are not far behind the heathen Chinee in this respect —ED.

In the region of Hein Fung in the early fifties there was a local rebellion in the Shanghai city. During that atrocious period many a man was slaughtered and butchered, and his gall-bladder taken out and invariably swallowed by some savage chieftain with the idea that it would brace up his courage—this latter being said to reside in the gall. The Chinese word for bravery means a large gall.

In the History of the Three Kingdoms, mention is made of a distinguished general who, on an eye being struck out, immediately picked it up and said: "This is made of my father's essence and my mother's blood; I dare not throw it away." And forthwith he swallowed it.

These are instances showing that from time immemorial the people of China have had a notion of the peculiar virtue of the human body; and not only so, but even excrementitious and effete matters are sometimes used. Thus solid fæces are moulded into the shape and size of a chestnut and hermetically sealed in a jar and buried in the ground for a number of years, then taken out again, when they have a gray color and no odor, and are carefully covered with gilt and stowed away to be called for by some eccentric medico, when they are euphemistically denominated "Golden Beans." A human placenta is sometimes cleaned, cut up in pieces, and given to a white duck to feed, and after a few days the latter is killed, cooked, and given to the patient. Cat's placenta is roasted to ashes on a tile and taken in a warm drink, for consumption; young boy's urine is taken in samshu and sugar, though parents generally object to this, having an idea that it will have a reflex action in shortening such a boy's life. Of course there are many other things infinitely more unspeakable that are or may be used, in the despairing hope of life, but the foregoing I know from personal observation.

But are there no Chinese drugs and remedies that are worthy to be rescued from oblivion? Certainly. Many have already been naturalized in the Western pharmacopœias, such as rhubarb, camphor, mercury, musk, etc. And there are some empirical methods that will surely reward a trial, but are either not known or are ignorantly sneered at because of Chinese origin. For instance: when a child has eaten too much or otherwise brought on discomfort to the abdomen, nothing is so effective as to put from two drachms to an ounce of pi-siau (native sulphate of soda) in a thin cotton band and apply to the abdomen; next morning the stuff has almost entirely disappeared (very likely by absorption, evaporation, or mechanical loss), the abdomen has subsided, and the child is well. This is a pleasant way of using a cathartic, is easily done, and is effective. Another empirical method is scraping or pinching the skin for mild cholera, sunstroke, etc. This consists of scraping the back till it is striped like a zebra—it looks barbarous, but its effect is instantaneous. In the sickly months of the summer, when one feels out of sorts, with perhaps a touch of colic, first let his spine be scraped clear down to the lumbar region, then the median line in front, and either side of the ribs, and he will feel the charm right away; of course, this is nothing more than counter-irritation, and brings the blood to the surface to be redistributed, but no medicine in the pharmacopœia can give such rapid and happy effects under the circumstances. A milder method is, pinching the skin of the neck till it is covered with red vertical stripes. There can be no mistake in these methods being useful, as I have experienced their benefits myself many times in these nearly twenty years. With the exception of these few gleams of phosphorescence, it is all darkness in the medical horizon of China.—Doctor Suvoong, in *China Medical Missionary Journal.*

Evolution of the Corset.—Doctor Havelock Ellis remarks it would be interesting to trace the origin and development of the modern waist in women. The Greeks of the finest period knew nothing of it. During the period of decadence women began to compress the body with the apparent object of emphasizing the sexual attraction of a conspicuously large pelvis. Hippocrates vigorously denounced the women of Cos for constricting the waist with a girdle. The Romans adopted this practice from the depraved Greeks, and Martial often alludes to the small waists of women of his time. Galen speaks in the same way as the modern physician regarding the evils of tight lacing. Since then matters have changed but very slightly. The apparent development of the pelvis has been further artificially exaggerated by that contrivance which in Elizabethan times was called a "bum-roll," and more recently a "bustle." The tightening of the waist does not merely emphasize the pelvic sexual characters; it also emphasizes the not less important thoracic sexual characters. As Doctor Louis Robinson expresses it: "It is very likely one of the reasons (and there must be strong ones) for the persistent habit of tightening up the belly-girth among Christian damsels, is that such constriction renders the breathing thoracic and so advertises the

alluring bosom by keeping it in constant and manifest movement. The heaving of a subclavicular sigh is likely to cause more sensation than the heaving of an epigastric or umbilical sigh. This double effect of waist constriction upon hips and chest is fully sufficient to account for its origin, and it has been kept up partly by custom and partly from that 'sense of support' always felt by those who have for years been subjected to the practice." Among the Hottentots the "bustle" is represented by a natural excrescence of fat, whence the name of *steatopygi.*—*Medical Standard.*

Treatment of Prostatic Hypertrophy by Ligature and Division of the Vas Deferens.—Isnardi (*Centralblatt für Chirurgie*) reports the case of a man, seventy-two years old, who for a year had suffered with prostatic hypertrophy that failed to yield to the usual therapeutic measures. Relief was finally afforded by ligature and division of the vas deferens. Six and a half weeks after the operation, retention of urine and incontinence had disappeared, and the bladder was tolerant of urine for seven hours during the night; and the urine, previously purulent and at times hæmorrhagic, was clear and otherwise normal. The prostate itself, which prior to the operation was of decidedly abnormal size, became scarcely appreciable upon rectal examination. The vas deferens from the point of division pursued an irregular course, and was thickened and nodular in places; the epididymis smaller than normal, particularly at its distal extremity and in its body; the testicle reduced about one-half in size.

Cleanse the Primæ Viæ.—Empty the alimentary canal before attempting to check diarrhœa. Within the last few weeks several cases in adults and children have been seen in which the attempted locking-up of irritating and decomposing material in the intestines has only done harm, as must necessarily be the case; the bowels, unless paralyzed, continue to move frequently but ineffectively, and toxins are absorbed, and with children there may be convulsions. Calomel or castor oil and spiced syrup of rhubarb should be given to secure efficient purgation, or the intestine should be irrigated with warm saline solution. After this, employ an efficient antiseptic. When desired, bismuth salicylate may be added as an auxiliary astringent, and if an opiate is additionally needed, Dover's powder may be employed. Diet, of course, must be properly regulated.—*Philadelphia Polyclinic.*

Mouth-Breathing.—Pneumonia and pleurisy, when occasioned by nose disease, usually originate through mouth-breathing, preventing the proper preparation of the inspired air. This is more frequently the cause of these diseases than it is usually considered to be. That this want of proper preparation is very dangerous is shown by the fact that the operation of tracheotomy is almost invariably followed by a pneumonia. It is true that by this operation the air is carried more directly to the chest than by mouth-breathing, but mouth-breathing exerts precisely the same influence as the tracheotomy tube, except only in a more limited degree. In mouth-breathing the surface over which the air passes before it enters the lungs is diminished to perhaps a little over half the normal, whereas after the operation of tracheotomy it is diminished to less than one-third normal. —*Exchange.*

Rheumatic and Gouty Hands.—At the Pathological Society of Manchester, Doctor Reynolds mentioned points of pathological difference in the hands in cases of chronic rheumatism and chronic rheumatoid arthritis as compared with those found in the hands in chronic gout. In chronic rheumatic conditions, as a rule, the lesions are found in symmetrical joints to an equal extent, and the deformities produced are in most cases similar. In chronic gout, on the contrary, the changes in the hands are found in asymmetrical joints to an extent differing much on the two sides, the resulting deformities being totally different.—*Quarterly Medical Magazine.*

Didelphic Uteri, with Hæmatokolpos and Pyokolpos.—Doctor F. C. Batchelor, of Dunedin, records two cases of the above rare abnormalities. In each case there was a double uterus and a double vagina. Retention of the menstrual fluid occurred in the right vagina in one case and in the left in the other. As a result of distention a rupture occurred through the upper portion of the vagina in both cases, and an escape of the retained menses followed, but not completely. Subsequently septic changes ensued in the pent-up secretions, causing pyokolpos.—*New Zealand Medical Journal.*

The Eye in Tuberculosis.—Unequal dilatation of the pupils is regarded by Dentrée as a sign of great value in the diagnosis of pulmonary tuberculosis. It is present, he says, in the majority of cases of this disease

The Medical Age.

VOL. XIII. DETROIT, SEPTEMBER 10th, 1895. No. 17.

Original Articles.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.*

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S. ARMY.

Military Sanitation may be defined as the art of preserving the health of soldiers, and hence is extremely comprehensive in that it includes not only military medicine and surgery, but everything that pertains to the prevention and cure of disease and injury under the peculiar and varied conditions of military life, and demands of its followers, besides a knowledge of scientific questions of treatment, very exact military training and execution.

One of the most important subdivisions of this great subject is *Organization*, and yet I venture to say that almost during this entire generation no professional subject has attracted less attention in our country than *military* sanitary organization, and consequently none is less understood.

With a view to a more general dissemination of a knowledge of this subject, I invite attention to:

I. THE RUSSIAN ARMY.‡

Here sanitary organization is based upon the regimental hospital, each fighting unit (battalion) having its own sanitary *personnel*, appliances, and transport. Upon this, in active service, is engrafted a divisional organization following the lines of modern military sanitation.

The sanitary *personnel*, the surgeons, have no military rank, but belong to a class designated "official"—which includes all persons not actually fighting men—and are considered as civilians attached. In common with all other government officials, they have standing according to their rank in the "Chin." All Russian military officials are known technically as "Voyennii Klassnii Chinovniki," and belong to one or the other of the following named classes: Chaplains, intendance officials, surgeons, veterinarians, artillery officials ("Artilleriiskii Chinovniki"), engineer officials ("Injeniernii Chin."), apothecaries, officials of the various educational establishments, etc.

In the foregoing groups there are no special names for grades, which are only denoted by the particular class rank in the "Chin" which the individual official has, and which is, in effect, a social or court standing. For example: All surgeons are designated "vrachi," yet they have rank in the "Chin" from the Third to the Ninth Class—the highest medical officer having the former and the lowest (junior surgeon) the latter. The highest apothecary official ranks with the Fourth Class, etc. All surgeons wear a uniform of dark green cloth, the coat (tunic) having cuffs and collar of the same, but piped with scarlet, and the shoulder knots narrower than those of combatant officers and ornamented with silver lace; the trousers are uniform in color with the tunic, but without stripe; the undress cap is also of dark green, with band of the same piped with scarlet. The subordinate *personnel* wear the same uniform as the regiment to which their hospital belongs.

The organization of the *personnel* of the Medical Department of the Russian Army is as follows:

Chief Medical Department.—One chief surgeon, one assistant, one chief inspector, four principal officials (surgeon, veterinarian, pharmacist, and oculist), thirteen surgeons, one pharmacist, eighteen minor officials, forty-five clerks, four couriers. In addition, this department has at its disposal five surgeons,

*Read before the Association of Military Surgeons.

‡Data furnished by the Division of Military Information, Adjutant-General's Office, U. S. A.

fifteen pharmacists, fifteen veterinarians, and twenty-eight junior "feldshers" whose duties correspond to those of the "hospital corps" in the U. S. Army:

Military Districts and Staff.— In each District Military Medical Department there are: One chief, one district medical inspector, two assistants (surgeon and pharmacist), one oculist, one veterinarian, one surgeon and one pharmacist as secretaries, and an indefinite number of "feldshers" and clerks: In the Staff of Army Corps, one surgeon and one "feldsher": Staff of Infantry or Cavalry Division, one division surgeon: Staff of Field and Reserve Artillery Brigade, two surgeons, one veterinarian, and seven "feldshers": Staff of Sapper and Railway Brigade, one surgeon.

In the Line.—In an Infantry Regiment of four battalions there are: One senior surgeon, four junior ditto ("vrachi"), one senior and four junior "feldshers" (dressers), one compounder ("abtechnii feldsher"), fourteen dresser pupils, one hospital sergeant (nadziratri volniki"), and three hospital orderlies —all these are classed as non-combatants. The average strength of the infantry battalion is about 1000 of all ranks, and the companies in a four-battalion regiment are numbered from 1 to 16. All of the non-combatant officials in a regiment are grouped into what is called a non-combatant company, which is not included in the numbering.

The medical *personnel* allotted to other fighting units is in proportion to strength, based upon the requirements of an infantry regiment.

A Cavalry Regiment has usually from 777 to 1000 men, depending upon the number of squadrons — four or six. A four-squadron regiment has: One senior and one junior surgeon, one veterinarian, six "feldshers" (in a six-squadron regiment, seven), four veterinary "feldshers," two "feldsher" pupils, one supervisor of sick (non-commissioned officer), and two hospital attendants.

The Artillery is organized into brigades of six battalions each, the average strength being 1100 of all ranks in each brigade. A foot battery has two "feldshers," one "feldsher" pupil, and one hospital attendant; a horse battery the same; a mortar battery, four "feldshers" and one hospital attendant; the artillery parks, flying and movable, each one surgeon and seven "feldshers."

A Sapper Battalion is allowed one surgeon, seven "feldshers," five "feldsher" pupils, and two hospital attendants.

A Reserve Infantry Battalion—four companies—has one senior and one junior surgeon, seven "feldshers," five "feldsher" pupils. A Fortress Infantry Battalion the same. A Depot Cavalry "Cadre"—one surgeon, one veterinarian, four "feldshers," four veterinary "feldshers," and two hospital attendants.

The material, tentage, etc., of the regimental hospital, which always accompanies the fighting organization to which it belongs, is transported in four one-horse medical-stores carts; besides these there are four ambulance wagons, each drawn by four horses, and a two-horse wagon to carry thirty-two stretchers—two per company.

In peace or war the regimental medical units are completely organized, and the *personnel* is identical, save that in war eight additional junior "feldshers" replace the fourteen pupil "feldshers," and the capacity of the hospital is raised from sixteen to eighty-four beds—*i.e.*, twenty-one to each battalion a thousand strong.

In addition to the "feldshers," each of whom carries a knapsack containing dressing materials, six men are detailed from each company specially to act as bearers. A four-battalion regiment—sixteen companies, each containing two hundred and fifty men—furnishes ninety-six bearers from the combatant strength, who wear the arm band of the Geneva Convention, but only when actually employed in bearer work. During an action, the regimental medical *personnel* form collecting-stations to which the wounded are carried; but the regimental hospital is not pitched, ordinarily, except at the time the regiment goes into camp.

During active service the various medical units required on mobilization are organized from the regimental peace establishment, supplemented by men from the reserve; the drivers coming from the cavalry reserve. These units are in addition to the regimental medical organization, and are as follows:

To each infantry division in the field is attached what is called a "Sanitary Division,"

that forms a part of the divisional supply and transport column, and consists of a bearer company, a divisional ambulance hospital, and two "mobile" or field hospitals. In the case of sanitary divisions attached to active—as distinguished from reserve—infantry divisions, two extra "mobile" hospitals are included, making four in all for that division. The divisional sanitary organization is intended for the establishment of a main dressing-station, and to otherwise collect and despatch the wounded from the fighting line to the field hospitals. The *personnel* is made up of: One combatant officer commanding; five surgeons; one official—quartermaster; twenty-nine "feldshers," etc.; 217 non-commissioned officers and men of the bearer company; thirty-nine non-commissioned officers and men of the transport corps—a total of 292. Fifty stretchers, 2000 bandages—divided into ten packages,—fifty first-aid knapsacks, two operating-tables, four dressing-tents, and the necessary medicines, stores, etc., constitute the equipment. For transport, eight four-horse ambulance wagons, three one-horse medical-stores carts, fifteen two-horse stores wagons, and one four-horse stores wagon—for heavier portions of material—are required.*

With the Divisional Sanitary Train are twenty-four ambulance wagons, an equal number of stores wagons, six stretcher carts, and two medical-stores carts — each train carries 144 stretchers.

The organization of the Bearer Companies is practically identical with that of other companies, and the uniform is the same as that of the first regiment of the division to which it belongs, and the number of the division is shown on the shoulder-loop. The brassard of the Geneva Convention is worn, and no arms are allowed except to drivers, each of whom carries a hatchet but is not allowed the brassard.

* Longmore gives a somewhat different organization. His enumeration of the *personnel* of the Sanitary Division for the field hospital—to accommodate six officers and 160 men—is: Eight surgeons, sixteen dressers, fifty orderlies, and the necessary (?) officials; bearer company of one commissioned officer, one sergeant-major, eight sergeants, and 200 bearers; transport section, one officer and 108 drivers—total, 393.

The Divisional "Mobile" Field Hospitals constitute the third line of medical assistance, and each affords accommodation for ten officers and two hundred men. Their rôle, location and movements are the same as in other armies. The *personnel* of each hospital comprises five surgeons, two other officials, 107 non-commissioned officers and men—including twenty-eight for transport duties,—four "Sisters of Mercy," fifty-seven horses, and twenty-five wagons. The equipment includes, besides bedding and clothing for ten officers and 200 men, three large tents—each to hold twenty men,—210 bedsteads, 105 tables, forty stretchers, and the necessary medical stores, etc. Transport requires nineteen two-horse wagons, one four-horse wagon —for heavy parts of tents,—four one-horse stores carts, and one four-horse carriage for the "Sisters." The uniform of the *personnel* of these hospitals is the same as that of the *fourth* regiment of the division, with the number of the hospital on the shoulder-loop; the arms and use of the brassard are as described for the bearer company. During an engagement these hospitals are established somewhere in the rear of the line of battle; and, when necessary, in addition to the permanent *personnel*, surgeons and dressers are detailed from the regiments in sufficient number to meet the requirements of any particular emergency. The divisional ambulance hospital constitutes the dressing-station, which is located in the immediate rear of the fighting line, and its *personnel* is furnished by detail from the regimental surgeons and the bearer company.*

The Reserve Field Hospitals, of which 240

* Longmore says that in European Russia these hospitals number eighty-four and are permanent formations. In time of war they follow a few marches in the rear of the army. Each field hospital will accommodate thirty officers and 600 men, and can be divided into three equal sections. The *personnel* consists of one commandant (non-medical officer), one principal surgeon, nine surgeons, one apothecary, two compounders, and 304 non-commissioned officers and men, of whom sixty-three belong to the transport service. Each hospital has a train of twenty-seven carriages, which may also be employed to transport the sick to the hospitals further in the rear. Both material and hospital stores, in time of peace, are kept in the Intendance depots. The *personnel* and horses are organized only during active service.

are maintained, in time of war are established at points on the line of communication. They have no transportation, their *personnel* and stores being forwarded by rail, boat, or requisitioned transport. Each has five surgeons, four officials, eighty feldshers, etc., and four Sisters of Mercy. Their organization is identical with that of the divisional field hospitals, except as to transport.

The Military Sanitary Convoys, twenty in number, are mobilized in time of war for the transport from the front to the rear of wounded and sick. The strength of each is: One combatant officer in command, two surgeons, ninety-eight non-commissioned officers and men—including seventy-one for transport work,—two Sisters of Mercy, 137 horses, and thirty-six carriages—including twenty-seven four-horse ambulances, one four-horse kitchen wagon, seven two-horse stores wagons, and one one-horse medical-stores cart.

The Field Dispensaries are intended to supply the divisional and field hospitals with the medical and surgical stores required. In time of war, seven of these dispensaries are mobilized, each being provided with a supply equal to the requirements of four months. Three officials and twenty-one non-commissioned officers and men constitute the *personnel*. Transport is provided when required.*

There are seventeen Permanent Military Hospitals located in European Russia, eleven in the Caucasus, and six in Asia—divided into four classes. Class First provides 200 beds, with one chief surgeon, four other surgeons, four officials, one apothecary, eight feldshers, and seventy-six men of lower grades. Class Second has double the number of beds, three additional surgeons, one additional official, five additional feldshers, and 114 men of lower grades—otherwise duplicates the First Class. Class Third has 650 beds, one chief surgeon, ten surgeons, eight officials, one apothecary, twenty feldshers, and 152 men of lower grades. Class Four: 1100 beds, one chief surgeon, eighteen surgeons, one combatant officer, ten officials, one apothecary, thirty-three feldshers, and 233 of lower grades.

In Europe also there are about sixty Local Hospitals, an equal number in Asia, and two-thirds as many in the Caucasus, varying in number of beds from fifty to 350, the *personnel* of each consisting of from two to seven surgeons, one to two apothecaries, one official—hospital supervisor,—three to eleven feldshers, seven to twenty-seven of lower grades, and one nurse for each lot of eight patients.

In every independent unit or command there is a Troop Hospital, opened only when no local or military hospital is available; or, instead of the troop hospital, may be opened in each command Receiving Rooms of sixteen beds. The *personnel* in either instance is determined by the regulations governing the sanitary service as already described "In the Line," for each regiment, battery, etc.

The Central Medical Depot is at St. Petersburg, and nine other lesser depots are established at different points in the Empire; these are for the purchase, storage, and issuing of supplies.

Longmore declares all temporary hospitals are under the orders of the Director-General, who is attached to the General Staff of the Army. Whether or not this official is a physician, does not appear—probably not, inasmuch as the author further adds that the Director-General is assisted in his duties by the chief surgeon as regards medical details, and that the *personnel* of the hospitals are under his orders, except the surgeons, who are, however, subordinate to him in matters of discipline and administration.

It is a part of the duty of the Director-General, in active service, to see that all hospitals at the front are evacuated as rapidly as possible, and if the ordinary means of conveyance are insufficient for this purpose, recourse can be had to wagons of the Intendance or of the country in which operations are being carried on. It is also his duty to establish new field hospitals, and generally to control the supply and see to the efficiency of all military sanitary establishments. He receives his orders from the Chief of the General Staff, and is in immediate communication with the Minister of War regarding medical supplies, etc.

*According to Longmore, twenty-eight stores wagons are attached to each Field Dispensary, some of which follow the advance of the army, the others being distributed between the base and other points.

The present total of the Medical Department of the Russian Army does not materially differ from that of 1886, which was: Surgeons, 2808; pharmacists, 232; medical feldshers, 3804; company (squadron, battery) feldshers, 3445—which may be said to fairly represent the peace establishment.

II. THE ARMY OF ITALY.*

The Military Corps consists of: One Military Sanitary Inspectorate; twelve Military Sanitary Territorial Directorates; an indefinite number of Principal Military Hospital Directorates; Medical Officers; and twelve Sanitary Sections or Companies.

The Military Sanitary Inspectorate is composed of one inspector-in-chief with the rank of surgeon major-general, two sanitary inspectors ranking as surgeon major-generals or surgeon-colonels, one apothecary director, and one secretary. Each Territorial Directorate has one surgeon-colonel as director, one surgeon-lieutenant, one clerk, one orderly, and three attendants. The Principal Military Hospital Directorates are established, whenever necessary, by royal decree.

The number of Medical Officers assigned to the different combatant organizations is as follows: Regiments of Alpini (three or four battalions), one surgeon-subaltern per battalion; regiments of infantry or rifles (three battalions), one surgeon-captain and two surgeon-subalterns with regimental staff; regiments of cavalry (two battalions each), regiments of field artillery—corps or divisional—(two brigades), horse artillery regiments (three brigades and one train brigade), regiments of fortress artillery (three brigades and four brigades), regiments of engineers (seven brigades), each one surgeon-captain and one surgeon-subaltern, with regimental staff;† regiments of mountain artillery (three brigades), each one surgeon-captain and two surgeon-lieutenants.

Every regiment, and in case of the Alpini every battalion, has a corporal or lance-sergeant as sanitary assistant, except regiments of mountain artillery—which have three. The officers of the sanitary department are graduates of the military medical school at Florence.

Each Foot Sanitary Section consists of two surgeon-captains—mounted,—four surgeon-subalterns, one accountant-subaltern, one civilian (chaplain), one sergeant or first sergeant, two sergeants or lance-sergeants, six lance-sergeants or corporals as sanitary assistants—three of whom are apothecaries,—three lance-sergeants as bearers, eight corporal bearers, three corporal sick-attendants, 132 privates—bearers,—fourteen privates as sick-attendants, and eight officers' attendants. The Train of the Section has also one officer, twenty-five enlisted men, twenty-six horses, and four two-wheeled and eight four-wheeled vehicles.

Each Mounted Sanitary Section has one surgeon-captain—mounted,—one surgeon-subaltern, one accountant-subaltern, one chaplain, one sergeant or first sergeant, one lance-sergeant, two sanitary assistants—lance-sergeants or corporals, and one an apothecary,—one corporal sick-attendant, one corporal bearer, four privates as sick-attendants, twenty privates as bearers, four officers' attendants, and a detachment of artillery train consisting of thirteen privates, fourteen horses, and two two-wheeled and four four-wheeled vehicles.

The Sanitary (Hospital) Corps in active service is assigned as follows: One section to each infantry and cavalry division, and a headquarters or extra section to each *corps de armée*. The organized militia has likewise twelve sanitary sections. The uniform is similar to that of the infantry, except that the badge on the shako is a star with a Geneva cross; a white pompon is also worn with the number of the company upon it in red, and the Geneva badge appears again on the arm; the men carry side arms only.

Preliminary estimates for the Italian Army, 1894–1895, provide for the following sanitary organization: Thirteen surgeon-colonels, twenty-six surgeon-lieutenant colonels, fifty-five surgeon-majors, 283 surgeon-captains, 288 surgeon-lieutenants and second lieutenants*—total, 665; likewise twelve account-

*For many of the facts herein stated I acknowledge my indebtedness to the Military Information Division of the War Department, U. S. Army.—AUTHOR.

†Regiments of engineers differently constituted have the same proportionate allowance of medical officers.

*These may be replaced by surgeon-second-lieutenants in reserve.

ant-majors, twenty-five accountant-captains, fifty-seven accountant-lieutenants and second lieutenants—ninety-four in all,—with a number of "scrivani locali" (clerks) for the hospitals, usually about ninety in number; there are 115 under-officers—sergeant-majors, first sergeants, and sergeants,—forty-two sanitary assistants and bearers — lance-sergeants, — twelve lance-sergeants or corporals for accountant duty, 290 sanitary assistants, attendants, and bearers—corporals in rank,—and 1840 privates — also sanitary assistants, attendants, and bearers,—making a total of 2229. Also there are in the neighborhood of one hundred apothecary officers, whose duties are chiefly in connection with the medicine supply depots. Before the law of 1894 went into effect, which was enacted as a measure of economy rather than efficiency, the organization represented: Three surgeon major-generals, three field officers (medical), and three surgeon-captains—all mounted—as Inspectors of Military Sanitation; twelve field medical officers and twelve surgeon-captains, with thirty-six horses, representing the twelve "District Directorates" (army corps); seventy-seven field medical officers, eighteen surgeon-captains, along with seventy-two lieutenants of the line, 103 sergeants, 275 corporals, 1925 privates, and 172 horses, attached to the hospitals and constituting the twelve Medical Companies; four medical field officers, two surgeon-captains, with four lieutenants of the line, four sergeants, two corporals, twenty-eight privates, and ten horses, representing the School of Application of Military Medicine, to which one surgeon-captain — mounted — and one lieutenant of the line were attached. To the First Legion Carbineers (cadets)—115 regiments infantry (Bessaglieri, Alpini) — were attached 108 surgeon-captains, 238 lieutenants of the line, and 108 horses; eighty-seven mounted surgeon-captains were assigned to an equal number of Districts; two surgeon-captains—mounted—to the Disciplinary Company (Penitentiary); twenty-four surgeon-captains — mounted — and twenty-four lieutenants of the line to twenty-four regiments of Cavalry; thirty-one surgeon-captains — mounted — and thirty-two lieutenants of the line to thirty-one regiments of Artillery; four surgeon-captains—mounted—and four lieutenants of the line to four regiments of Engineers; eight surgeon-captains —mounted—and one lieutenant of the line to Invalid and Veterinary Schools and Colleges. The summary is: Three major-generals, ninety-six field officers, 300 captains —medical officers,—376 lieutenants, 107 sergeants, 277 corporals, 2053 privates of the troops, and 492 horses.

When the army is on war footing,* with the Intendance at the headquarters of an army in the field, there is an Army Sanitary Directorate organized as follows: One director surgeon-colonel and one surgeon lieutenant-colonel, four surgeon-captains, four surgeon subalterns, one chief and three lesser apothecaries (civilians), two clerks, two officers' orderlies, fifteen officers' servants—the three latter classes being enlisted men; likewise eight horses. The train detachment is represented by one sergeant, one lance-sergeant, five corporals (saddlers, etc.), twelve lance-corporals and privates, and twenty horses, with five vehicles of all kinds, including forage and ambulance wagons. Total, ten officers, thirty-eight enlisted men, four civilians, and twenty-eight horses.

There are also fifteen Field Hospitals, of 200 beds each, attached to headquarters, the organization of each being as follows: One director—a surgeon-major or surgeon-captain,— two surgeon-captains, four surgeon-subalterns, one accountant-subaltern, one apothecary, one chaplain, one first sergeant, two sergeants or lance-sergeants, five sanitary assistants (two of whom are apothecaries), two sick-attendants (corporals), two bearers (corporals), eighteen sick-attendants (lance-corporals and privates), twelve bearers (lance-corporals and privates), ten officers' attendants, and a Civilian Train of eleven men, twenty horses, one four-wheeled† and eight two-wheeled vehicles—a total of eight officers, fifty-two enlisted men, thirteen civilians, and twenty-four horses. There are also field hospitals of 100 beds and mountain hospitals

* From the "Instruzione per la Mobilitazione del R. Esercito, Ptomo 1. Formazioni di Guerra, 20 Luglio. 1892."

† The four-wheeled vehicle is an "omnibus" for carrying the subaltern officers, the apothecary, the chaplain, and if necessary the sick.

of fifty beds, with a less numerous *personnel* than just given.

As a maximum, each army in the field has at its disposal four transport railway trains* for sick and wounded, organized as follows: One surgeon-captain as train director, three surgeon-subalterns, two non-commissioned officers, five lance-sergeants or corporals as sanitary assistants, four officers' attendants, thirty-five privates; also one combination car, thirty-five cars for transport of wounded, one car for baggage, one car for transport of chests of clothing, equipage, hospital stores, etc. The composition of this train may be modified according to circumstances.

With the headquarters of the army corps there is a Corps Sanitary Directorate,† as follows: One surgeon-colonel or lieutenant-colonel as director, one surgeon-lieutenant, one clerk, one orderly, three officers' attendants, and two horses.

With each corps, headquarters, and division of infantry, there is a Foot Sanitary Section, and with each cavalry division a Mounted Sanitary Section, the organizations of which have already been given. The personal organization for each regiment is as follows: Infantry or rifles—One surgeon-captain—regimental staff,—six surgeon-subalterns—two to each battalion,—three sanitary assistants—one to each battalion,—and twelve bearers—four to each battalion: Cavalry—One staff surgeon ranking as captain, two surgeon-subalterns—one to each battalion,—and one corporal sanitary assistant: Horse or Field Artillery—One surgeon-subaltern to each brigade: Mounted Batteries—Each one surgeon-subaltern, one corporal sanitary assistant, and two bearers.

(*To be continued.*)

*Cars for the transport of wounded are supplied with the necessary equipment, and each of them should be supplied with eight litters; 280 wounded may thus be carried. The *personnel* of the transport trains is ordinarily drawn from the territorial militia, and is attached, in accordance with orders from the Minister of War, to the Army Directorate.

†The baggage, etc., of the Army Corps Sanitary Directorate is carried in one of the wagons of the staff of the corps, or else in the wagons of the Sanitary Sections attached, according to orders received from the chief of staff of the corps.

A CONSIDERATION OF SCORBUTIC MANIFESTATIONS IN THE YOUNG SUBJECT.*

BY JOHN C. WISE, M.D., U. S. NAVY.

While scorbutus has declined in importance as a disease incident to sea life and to armies, it would seem that changing physiological and economic conditions may cause it to be dreaded on land, as it has hitherto been on the sea.

A most interesting feature in this connection is the close resemblance of this disease—as seen in the young—to rachitis, and there can be no doubt that many cases have been considered and treated erroneously.

Not only can scorbutus become engrafted on a rachitic stock, but the causal agencies of these diseases are not remote, both arising from deprivation of those proximate principles and elements which are requisite to normal histogenesis.

Furthermore, the clinical histories of these maladies can be paralleled, and until recent years German writers have insisted that the so-called "infantile scorbutus" was but acute rickets. This contention was undoubtedly founded on insufficient "post-mortem" evidence, and is no longer held. What made the view more plausible was the fact before noted—that the scorbutic condition is so often engrafted on rachitic stock,—and the same decided bone symptoms and the same pseudo-paralysis exist in both diseases.

Let us review the history of the differentiation of these maladies. Twenty-two years ago the Swedish Doctor Ingerslev pointed out radical differences between the two affections, though admitting their similarity in some respects. At this time the Germans based their belief in the non-existence of scorbutus in infants on the fact that no sponginess of the infantile gums had been discovered. In 1880 Doctor Kuhn reported an epidemic of scorbutus at Moringen; thirteen cases were recorded of infants, suckled by mothers who were at the time scorbutic. Heubner of Leipsic, and Rhein of Frankfort, made able researches, and the subject was taken up in America by Northrup, who reported four autopsies; later (in 1891) Starr,

*Read before the fifth annual meeting of the Association of Military Surgeons.

Holt and others reported 111 cases to the New York Academy of Medicine. In England, Cherdle (in 1879) confirmed the observations of Ingerslev, and definitely fixed the place of this disease; and while there have been many other workers along this line in that country, it remained to Professor Barlow to establish the most important post-mortem appearances in an extensive series of cases, confirming the work already done by Doctor Northrup in this country.

The protean feature of this disease is hæmorrhage. Spoliation of the blood is carried to such an extent that hydræmia is established, involving effusions into most of the organic tissues, the favorite seat being subperiosteal; and it is these conditions, so essential to the scorbutic state, which have established the identity of the disease. Thus, while the usual seat of the hæmorrhage is beneath the periosteum, it has also been reported as occurring in the nose, intestine, urine, muscles, medulla of the bones, pleura, spleen, and gums. In Professor Barlow's cases a sheath of blood was found about the femur, and serous extravasation in the femoral muscles—with blood clots in some instances,—and the same changes were observed in the tibiæ and scapulæ, while the humeri showed spongioid ossification with extensive medullary hæmorrhage; in the ribs the periosteum was detached, and a chocolate-colored débris was found between it and the bone. The joints are not the seat of hæmorrhage, and the visceral extravasations are slight. Under the microscope, it was found that the trabecular structure of the bone was in great measure absorbed; and it may be here noted that the minute pathology of scorbutus as observed by Bristow is at variance with that of rachitis as studied by Virchow and Kolliker.

Scorbutus attacks infants, as a rule, before the end of the first year of life. We notice, as to flesh, no great loss, but the pallor is extreme, marked by muddiness of the skin; later the little patient, hitherto mentally active, becomes apathetic or irritable; muscular activity ceases; the lower limbs become flexed, and efforts to extend them provoke piteous cries of pain. Swelling of the limbs, usually symmetrical, soon follows; at first undecided, it progresses to deformity—the favorite seats of this symptom are the wrists, the epiphyseal junctions of the ankles, and the thighs, the swelling at the ankles extending upon and involving the tibiæ to a greater or less extent. When the child is held in the lap, the limbs hang in a helpless fashion, with feet everted, very suggestive of paralysis. Instead of sitting, the patient now reclines, and no longer uses the lower limbs, though previously able to walk. There is intense irritability and pain of the affected parts, due doubtless to two causes—pressure on the nerves, and anæmia.

In cases somewhat advanced, a characteristic occurrence is hæmorrhage into the orbit; unless aware of the true nature of the disease, we are apt to believe we are dealing with a catarrhal condition; the lids swell, but there is little discharge, and no relief is afforded by treatment which is usually successful in catarrh. Some ecchymosis of the lids is noted, and the eye looks protuberant—which is in reality the case, it being displaced by hæmorrhage beneath the orbital periosteum. This displacement is an obstinate condition, and exists in a case under the writer's care, four months after disappearance of other symptoms.

If dentition is in progress, it is delayed, or the teeth are black and corrugated when they appear. The gums are very vascular and bleed easily; soon sponginess is marked, and fleshy growths protrude about the erupting teeth; sometimes the teeth are covered in by the swollen gum as if by a hood. All of which is accompanied by a most fœtid condition of the breath.

The digestive symptoms are markedly in contrast with those of rachitis. The appetite is good—an effort apparently to make up in quantity what is lacking in quality.

Diarrhœa does not exist, as in rachitis, unless cod-liver oil is being given, and even then it may be absent, the oil only serving, by its malassimilation and decomposition, to give a foul odor to the alvine discharges.

The urine is diminished, has a strong odor, is sometimes albuminous; hæmaturia, though noticed in some cases, is not a common symptom.

The temperature is elevated from one to

two-and-a-half degrees, and has slight diurnal variations. A prominent symptom is sweating of the head, just as in rachitis.

If after the lapse of a month or two the true nature of the case is not determined and appropriate treatment instituted, emaciation sets in, and we detect the osseous swelling about the femur and tibia more distinctly. If, on the other hand, the disease is to give way to improved diet and treatment, the subsidence of swelling at once commences, progressing rapidly, the bony formations are absorbed, deformity disappears, and motion is slowly restored.

The conditions under which scorbutus and rachitis arise are instructive. From time immemorial, and with ætiological accuracy, rachitis has been looked upon as a disease of the poor, the illy fed, clad, and housed. Scorbutus in the young, on the other hand, is found in the homes of the affluent oftener than in those of the indigent. This is due in greatest measure to the extensive use, among the better classes, of proprietary foods—which are beyond the reach of the poor.

While we are aware of the conditions which produce rachitis and scorbutus, we cannot say what particular chemical substance it is that prevents the development of either of these morbid states; it is neither citric nor malic nor tartaric acid, nor the alkaline bases, nor yet their combination; but we know that these substances abound in the juice of oranges, lemons, and fresh vegetables. The exact cause is still a question awaiting solution by biologic chemistry. Garrod has demonstrated a deficient alkalinity in scorbutic blood, and we know that malates, tartrates and citrates are convertible in the blood into alkaline carbonates; beyond all this there lie histogenetic changes, which we do not comprehend. But the fact remains that the nearer we approach Nature's formulæ, the safer is the diet for the young—uncooked meats, and milk, are more antiscorbutic than the cooked.

While infantile scorbutus has been observed in children at the breast, these cases are reported from abroad, where the dietary of the lower classes is so often deficient. In the vast majority of cases the infant has been deprived of its natural aliment, breast-milk, and some of the proprietary foods have been substituted. We know that, however closely these preparations approach the analytical composition of human milk, and however plausible their claims on theoretical grounds, as a true physiological dietary they are practically failures. The infant's food is a natural product, and if it must be changed we naturally would substitute the milk of some allied mammal; and thus the best substitute for human milk is cows' milk.

Briefly, in conclusion, let me call attention to the practical therapeutic benefit to be derived from the researches in this field which have been mentioned. To those who doubt the differentiation of the two diseases, treatment may assume the character of a control experiment.

If, in a case of scorbutus which has been treated as rachitis, we dispense with the chalybeate and the lime syrups—which after all are but adjuncts to a proper diet—and use pure cows' milk, sparingly diluted with lime-water and scalded (this much we must concede to sterilization); if we permit some article of the much abused starch group in the dietary, preferably baked potato, finely sieved; and last, but not least, if we allow orange-juice, not by the teaspoonful, but sweet oranges *ad libitum*,—if these things be done, a change most gratifying will be at once manifested. In the writer's cases it has been the most complete he has ever known in medicine. As to cod-liver oil, it may or may not be superadded; a good criterion will be to watch the bowels in reference to its assimilation; as a rule it is unnecessary.

Navy Yard,
Washington, D. C.

NEUROLOGY OF THE FEMALE REPRODUCTIVE ORGANS.*

BY M. R. MITCHELL, M.D.

The nerve supply of the uterus and its appendages is derived from two great systems, viz.: the nerves of animal life, through the internal sacral nerves; and the great sympathetic, through the inferior hypogastric plexuses. The spinal nerves supply the sphincter fibres of the cervix uteri chiefly, and the

*Read before the Western Obstetrical and Gynæcological Association.

sympathetic (mainly) the uterine body, Fallopian tubes, and ovaries; hence the reflex nervous influence existing between these structures accounts for the fact that if one suffers all the rest suffer with it. In the process of ovulation the ovary becomes congested, and it has its sympathizers in the tubes and uterus.

The chief physiological determining cause of labor is traceable to the direct pressure of the uterine contents upon the sphincter fibres of the mouth of the womb, occasioning an irritation which is reflected to the uterine walls, causing contraction and expulsive effort. This same reflex influence, put forth by the sympathetic nerve system, clearly accounts for a striking physiological intimacy and a pathological affinity between the utero-ovarian and other structures of the body. Morning sickness, anorexia, and the various forms of morbid appetite can be explained best, perhaps, by the reflex action of a copious network of the sympathetic innervation of the utero-ovarian apparatus and that of the stomach. Guéniot, in speaking of vomiting in pregnancy, says: "A morbid or abnormal state, the nervous system as the carrier of reflex action, and the stomach, are the three prime factors in this malady." He therefore urges that any abnormality of uterus or appendages, whether ulcers, excoriations, flexures, or of a specific nature, should be corrected, and that the nervous system, particularly the spinal nervous centres, should receive attention.

The pathological aspect of my theme assumes an attitude of startling importance when is called to mind how frequently the practitioner is foiled in the attainment of a satisfactory ætiological explanation of the existence of some new affection in a distal organ, or perhaps the sudden development of some latent malady. Pozzi says:

> There is no function upon which uterine disease reflects more constantly than the digestive, and ignorance of this fact may cause grave errors in diagnosis. . . . Dilatation of the stomach is very common in metritis of long duration. These patients suffer from a loss of appetite, nausea, and a form of flatulence which occurs as a chronic tympanites, so that the abdominal enlargement interferes with palpation and bimanual exploration. . . . Women who suffer with metritis or displacement, sometimes experience a dry cough, without any disease of the respiratory organs.

Among the long list of cutaneous affections, many are disappointing as to ætiology until one is led to look for a nervous influence that in turn directs attention to an inflammation or some derangement connected with the uterus or its appendages; and the practitioner will often be equally chagrined as to the relief of those dermopathies until the primary malady affecting the sexual organs is relieved.

Who has not observed the sudden disappearance of an acne, coincidental with puberty or the menopause, when the function of ovulation is slow in becoming established, and when the menses are irregular or delayed? This eruption seems to be mainly along the expansion of the trifacial, which is accompanied by filaments from the sympathetic. A girl of fourteen or sixteen presents herself, possessing many of the charms of beauty, yet on account of a pimply face is really repulsive; and the relief of the same is often postponed until her womanly functions have been made to attain normal activity.

In a thesis published in 1886, M. Tourneux expresses an opinion that menstruation causes various cutaneous eruptions which serve as a nidus for a streptococcus. Professor Hardy applies the term "pemphigus" to a bulbous eruption of successive appearance, extending over several months, and appearing only in young girls between fourteen and twenty, in whom menstruation had been interrupted: he likewise considers suppression of the menses as one of the most frequent causes of erythema nodosum. A case is reported by Alibert, "of a young lady aged twenty-four who was attacked with a general scaly eruption following suppression of the menses caused by fright." Pruritus vulvæ with eczema is a frequent complication of the climacteric.

Scanzoni affirms that "anæmic women who have at the same time some affection of the genital organs very often present various eruptions on the skin, especially when there occurs an intercurrent exacerbation of the uterine trouble; these eruptions are chronic eczema, acne rosacea, erythematous eruptions, urticaria, as well as a furuncular diathesis."

Occasionally one observes general nervous manifestations such as hysteria, chorea, and

insanity, impossible to trace to any other than a utero-reflex origin.

A girl of seventeen, otherwise healthy and strong, was affected with a severe form of dysmenorrhœa, complicated with hysterical convulsions at each menstrual period; a cervical stenosis was relieved, menstruation became normal, and the convulsive attacks were no longer experienced.

Two young women, during primiparous pregnancies, were affected with marked choreic symptoms. One was relieved in a few weeks under the administration of arsenic bromide; in her second pregnancy she was not affected by this nervous lesion. The second case was only partially relieved under the use of the remedy; however, after normal full-time confinement, no further chorea was experienced until she was about three months gone in her second pregnancy, when she was again attacked with chorea and convulsions, resulting in miscarriage.—Both of these cases, according to the history obtained, were of a distinctively nervous temperament.

Parvin refers to a discussion of this subject in the London Obstetrical Society, in which Doctor Herman declared he believed "in the connection between chorea and pregnancy, and that the majority of such cases were benefited by the induction of abortion or of premature labor." Parvin also refers to two other cases, reported by Jones, of chorea complicating pregnancy—one at seven months, which ceased after the induction of premature labor, the fœtus being decomposed; the other with delirium, and paralysis of the left arm, with recovery after confinement.

Functional aberrations of the sensorial and intellectual faculties are often observed in pregnant women. Such disorders of the intellect sometimes proceed even to insanity. I recall three cases of partial insanity occurring near the end of gestation, and all appeared to be relieved of the positive indications after confinement. The history of the three seemed to show they were of excitable, nervous, and irritable dispositions; two had convulsions previous to labor, and one had served a term in the insane asylum.

In a majority of these cases there is no doubt of a latent predisposition to nervous or mental derangement; and the predisposing quality is excited to outward manifestation through the reflex influence of pelvic irritation. Paralysis is a neurotic complication occasionally affecting the pregnant woman.

A lady, six months pregnant, came under my care two years ago afflicted with motor paralysis of the lingual muscles which are supplied by branches of the fifth pair of nerves; there seemed to be no other complication. Vocal articulation was almost impossible, and continued so until the end of gestation, when it began to improve slowly, but she did not entirely recover until six months afterward.

Neurotic disturbances in the form of neuralgias of the face, of the intercostal region, and of the thighs, are clearly traceable to different forms of metritis. When such slight ailments as cicatrices of the cervix, for instance Emmet's "cicatricial plug," are removed, relief from a distal neurosis may follow.

In a study of neurotic disturbances reflected from the sexual organs, one cannot fail to observe the striking analogy between the manifestations connected with the menstrual functions in the young girl and those in the pregnant woman. Thus far I have called attention to the reflex display of nerve function pertaining to the female generative organs, but I will now refer to an exhibition of more direct nerve disturbance in this locality, viz., pains of child-birth; for much has been said and written as to the baneful influences of our modern civilization upon the parturient woman, and there are those who venture to assert that if such were corrected, parturition would become painless.

The customs and methods of dress, improper and insufficient nutrition and physical exercise, improperly ventilated sleeping-apartments, injudicious and unwise marriages, and excesses of various kinds, undoubtedly have done and are doing much to intensify the sorrows and sufferings of child-bearing. Reference is often made to the uncivilized races, where women are supposed to be less perverted as to physical development, and to this is attributed the *supposed* lack of suffering in connection with the parturient process, and the fact that child-birth is regarded by them with so little apparent

apprehension. The fact is, however, that the information generally obtainable in regard to these classes, as to the real extent of their suffering, is not very reliable. It is an ambition among savage nations to develop stoical endurance of suffering and danger, and it is certain that whatever degree of diminution of pain in parturition the women of these barbarous races do experience as compared with their more cultured sisters is owing not entirely to the absence of customs that prevail in refined and civilized life, but to the deteriorating influences that obtain among the uncivilized; the tendency of savage modes of life is to impair the development of the nervous system; the nerve sensibilities are blunted, and the perception of pain is obtuse. Finally, those most competent to speak declare labor among savage women is very far from being a painless effort; and no one who has witnessed the throes of parturition in mares, dogs, cats, and other animals, can be convinced the act is here painless, though the assumption that it is is often cited to prove that the bearing of children should be devoid of suffering.

It is probable, however, that the highly cultured, refined and physically developed woman possesses a high grade of nerve structure, with functions of acute sensibility that enhance her keen perception of pain. The sufferings of parturition are mainly induced by compression of the uterine nerves by the contraction of the muscular fibres, an act that means a disturbance of the integrity of the nerve structures.

And now, although much of the suffering and danger in child-birth may be accounted for by a lack of the requisite physical culture and development—lack of tone,—by unwholesome food and drink, and by the deteriorating fashions of dress and society, yet with an equilibrium of the fullest development of all the powers of a true womanhood, the only logical and physiological conclusion is that normal labor, in a normal womanhood, will be, in every case, attended with more or less of suffering—that "painless labor" is a myth, a delusion, the fruit of intellectual fancy, and not infrequently the keynote of the grossest quackery.

Topeka, Kansas.

PARAPLEGIA FOLLOWING TYPHOID FEVER.

BY J. N. MENDENHALL, M.D.

Miss A——, 23 years of age, had always enjoyed fairly good health. A few years previous to her present illness she was thrown from a horse, but sustained no permanent injury. Her father died at the age of 67 of some form of paralysis, and her mother at the age of 59 of Bright's disease. I first saw her October 10th, 1894, and obtained a history of malaise, fever, and frontal headache, of ten days' duration. Her temperature was 102°, and pulse rate about 90.

After watching the patient a few days, typhoid fever was diagnosed. No unusual symptoms developed in the progress of the malady for some days; the temperature varied from 99° in the morning to 104° in the evening, reaching the latter figure but once; bowels were easily affected, a small dose of Rochelle salts producing several evacuations; no delirium, but some despondency and restlessness. On the 19th and 20th the temperature was normal and she seemed to be doing well; complained only of weakness; and I congratulated all concerned upon what promised to be a speedy and happy termination of the malady. On the 22d found the temperature still normal, but she declared she was becoming weaker—that she could scarcely move her lower limbs. Upon closer examination I ascertained that she had some pain in the back of the neck, that her tongue felt thick, that she had some difficulty in swallowing, and that her speech was altered. On the 23d all these symptoms were exaggerated, and the right hand was partially drawn and weakened; further, she was unable to move her lower limbs. The patellar tendon reflex was absent, but sensation remained, and she retained control of bladder and rectum. At no time was her mind impaired. On the 24th the fever returned and pulse began to quicken. Under the influence of heart and nerve tonics and stimulants such as strychnine, nitroglycerin and electricity, her symptoms became better except for the paraplegia and gradual failure of heart's action. The pulse rate varied from 140 to 180 per minute for the next five or six days, and on the night of October 30th she died.

Paraplegia, as a complication or a sequel of typhoid fever, is not a common affection. Neither of the two practitioners who were consultants in the case had ever had a like experience, and one, a most prominent member of the profession in North Texas, remarked that in an active practice of twenty-

five years he had never even heard or read of a similar case.

In examining the literature of nervous complications of typhoid fever, I find most writers are silent regarding paraplegia as a complication or a sequel of this malady; a few, however, barely mention it, and a few give it some slight notice, Nothnagel alone giving it decided prominence. The rule is that the paralysis comes on about the end of the second or beginning of the third week of the fever, as was the case with Miss A——, or else it comes on during convalescence. Hawkins, of London, collected from various sources sixteen cases of hemiplegia, mostly of the right side, occurring in the course of typhoid fever, and believes the condition to be the sequel to a non-valvular lesion of the heart leading to the formation of thrombi in the left auricle, whence emboli are detached and carried to and lodged in a cerebral artery.—Soft, dark clots have been found in the cerebral arteries on autopsy.

In my opinion, such was not the cause of the paralysis in this particular case, for the paralysis was progressive, the mind remained clear, the eyes were not affected, speech was but slightly altered, and it was paraplegia rather than hemiplegia.

The true pathological condition or morbid anatomy of the case cannot, of course, be stated with any degree of positiveness, since no autopsy was held, but I incline to the belief that there was a myelitis, the anterior horn of gray matter being affected; that this was brought about by a toxæmia induced by the typhoid; that retained effete material brought about changes in the nutrition of the nerve centres, interfering with their normal physiological functions—in other words, there was anæmia of some of the nerve centres. It is quite probable also that there was hereditary tendency to neurotic disease, as her father died of some form of paralysis.

Plano, Texas.

SUPPRESSION OF URINE FOR FORTY-EIGHT DAYS.

BY E. N. RININGER, M.D.

Was called January 18th, 1895, to see a young, intelligent lady aged 18, light complexion, tall and well developed, apparently a model of health; had always been healthy and strong, except for an attack of enteric fever the previous autumn. Five weeks prior to my visit she ceased urinating, but had no other noticeable symptoms; on second day, parents were somewhat alarmed and called in the family physician, who remained in attendance until the state of his health compelled him to temporarily withdraw from practice.

During those five weeks there had been no elevation of temperature; appetite and digestion normal; also normal condition of bowels, circulation, respiration, etc.—indeed, there was nothing abnormal save the suppression of urine alone, and a tender spot the size of the hand over the region of each kidney.

The whole category of diuretics was exhausted, with no effect whatever; then, fearing uræmic poisoning, her physician resorted to diaphoresis (on the fourth day) and kept it up regularly, employing even the steam bath. Sweating was easily brought on and was always profuse, and an odor of urea was claimed to have been noticed on such occasions. This treatment was continued up to the time I was called, every symptom in the meantime being closely watched day and night, and the bladder carefully palpated by the physician at each visit.

I found the patient as described, in a semi-recumbent posture, talking and laughing with callers. A close physical examination detected nothing abnormal but the extreme tenderness in the lumbar region. At every visit made by me the bladder was palpated carefully, but it was never found distended.

Since the suppression came on so suddenly, with no premonitory symptoms, I was led to believe the circulation of the kidney was shut off by some form of paralysis or acute urinary congestion; in which case diuretics would have no effect, since they could not reach the kidney, the blood-supply being cut off. I advised the use of electricity, but continued the treatment instituted by my predecessor. There was some opposition to electricity on the part of the family, and a physician from a neighboring village who was called in during my absence declared it was liable to kill the patient.

Visited patient every other day to watch for any untoward symptoms, being afraid of uræmic poisoning.

The family physician's treatment was kept up till January 26th, on which day I took with me a Faradic battery, explained fully my object in using it, and assured the family there would be no bad effects. Patient could feel electricity on every part of body except

over tender regions on back. I ordered battery to be employed for ten minutes morning and evening, placing one sponge anterior and the other posterior to kidney; also prescribed strychnine sulphate, one-fortieth grain, every three hours during day.

On January 28th the dorsal tenderness was greatly diminished, otherwise no noticeable change.

January 30th, 9 A.M. Tenderness about gone. At 8 P.M. was sent for in great haste, and found the patient suffering greatly with what she termed "cramp." I speedily discovered there was marked distention of bladder; patient had tried to urinate, but found it impossible. I employed catheter and drew nearly two quarts of urine. Continued battery and strychnine, ordering in addition a teaspoonful every three hours of the following mixture: Fluid extract corn-silk, two ounces; fluid extract henbane, thirty minims; acetate of potash, 150 grains; water, to make four ounces.

January 31st. At noon was again compelled to use catheter, and secured about the same amount of urine as before; that which first passed was perfectly transparent, of light amber color, slightly acid reaction, specific gravity 1.004, and no abnormal constituents so far as could be discovered.

Continued treatment as before for two weeks longer, during which time and up to present writing the patient has urinated from two to five times each day, the secretion being normal in every respect. There was a slight cystitis, however, for one week. Patient has been in perfect health ever since the middle of February.

M. Herman, a pupil of Ludwig, has shown that if the pressure in the uriniferous tubules be increased by anything interfering with the free exit of urine, a decrease in the amount secreted in a given unit of time occurs, and at the same time there is a marked decrease in the elimination of the solid constituents, especially of urea. As the pressure increases, secretion becomes less and less active till a point is reached where it is entirely suppressed. The capillaries and uriniferous tubules are arranged in alternate bundles, so that the distention of one set of vessels causes compression of the other; and it can be easily seen that when the uriniferous tubules are widely distended by a damming-up of their contents, they exert such a pressure on the blood-vessels as to materially interfere with the circulation, and diminished secretion results.

The secretion of a large amount of clear fluid after the sudden removal of an obstruction which has persisted for some time, may be explained by the fact that the vessels of the part then undergo dilatation which may not immediately subside; so in the kidneys this secondary dilatation allows the blood to flow with increased rapidity, and we have increased secretion in consequence—as in the case just given.

Whether this case of suppression was due to a damming-up of urine in the uriniferous tubules, some form of paralysis, or something else, I am not prepared to say; but I believe it was due to urinary congestion. What caused this congestion, I leave for some one else to answer.

New Washington, Ohio.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

A PSYCHOLOGICAL MYSTERY EXPLAINED.

Editor MEDICAL AGE:

Whenever THE MEDICAL AGE comes to my exchange table it is always thoroughly read. Hence, the interesting article in your number for July 25th, entitled "A Psychological Mystery," did not escape. I am inclined to reply to this by calling attention to a case somewhat similar, related to me by an assistant while teaching in the University of Michigan. This assistant related how a certain house in his native city had been unoccupied for three or four years because it was regularly visited by a ghost. The property was a most valuable one, yet it had deteriorated until it was practically unsalable, while no one would think for a moment of renting it. As this property was the sole residue of an estate supposed to be sufficient to support the heirs, some young ladies, the question became serious in more ways than one. Family after family sneered at the "ghost," but after spending a night or two in the house were only too glad to get away. My assistant was a daring young man, well acquainted with these young ladies, and interested in restoring to them their property; therefore, he and two associates armed themselves with knives and pistols and proposed to see what there was material about the "ghost."

Their experience in the "haunted house" was somewhat thrilling. I will not attempt to give it in detail, but will only say that

after all three had fallen asleep, one was awakened by the noise of footsteps on the stairs, that could be distinctly heard for some time; suddenly the door of their room opened and a figure in white approached the foot of the bed, and, with arms outstretched, motions were made to the thoroughly affrighted parties. As the light of the moon entered the room, and a good view of the deathly face was obtained, two of the parties jumped out of the window, alighting on the roof of a shed one story below. My assistant admitted he was too frightened to jump, or he would have followed. Then the figure in white retreated, and slowly wended its way down the stairs. Now was the time to act. Grasping his pistol, which was beneath the pillow, my assistant jumped to the head of the stairs and fired rapidly at the figure which was below. A series of most unearthly yells followed; the whole neighborhood was aroused; and the bleeding form was carried into an adjoining house and medical attendants promptly summoned. The white figure had been shot once through the calf of the leg. A confession followed, in which the young man who personated the ghost admitted the ghost act was a scheme to ruin this property because one of the young ladies had refused his offer of marriage. My assistant, in spite of the satisfactory results attained, declared it was weeks before he could eat a good meal or dared to go out alone after dark.

In reading your article over, there is a suspicion which crosses my mind that the person who used the uncanny phrase, "girl and woman, nigh onto fifty years," might know more even than she told; while the whole circumstance itself is no stronger proof of the presence of a ghost than the one my assistant related.

Very truly yours,

CHAS. H. STOWELL.

Washington, D. C.

NUCLEIN IN ACUTE PNEUMONIA.

Editor MEDICAL AGE:

Saturday, October 20th, 1894, called to see Mr. B——, who was suffering from pneumonia of the lower lobe of the left lung, in the first stage; pulse 110; temperature 104°.

On the Wednesday following, the upper lobe became involved; about the same time the right lung was attacked with bronchitis; temperature 105°; pulse 120; respiration 30. The succeeding Friday the patient was delirious, and evidently in a dangerous condition; the cough was almost constant: expectoration frothy and viscid, *not rusty;* consolidation of left lung complete; pulse feeble and 120; temperature 105°. I now regarded the case as hopeless. The left lung had been consolidated eight days, and the right had become involved, in the larger bronchi at least, and there were no apparent signs of resolution.

At my request, Messrs. Parke, Davis & Company placed at my service a liberal supply of Vaughan's *Nuclein*, and I commenced its use the following day (Saturday) by a dose of fifteen minims subcutaneously at 9 A.M., and repeated at 5.30 P.M.

Sunday morning there was a marked improvement in the bronchitis (of the right lung); expectoration less viscid and more profuse. Gave one drachm Nuclein hypodermatically morning and evening. Evening temperature normal; pulse 100; mind clear. No marked change in left lung.

Monday I found the patient sitting up, and he remarked: "I have no more use for you." On examination I found the respiratory movements had returned sufficiently strong to be readily noticed; the bronchitis of the right lung had disappeared, and the left was clearing. Tuesday the patient was up, sitting by the stove; pulse 80; temperature normal. Wednesday gave the last dose of Nuclein. Thursday, patient dressed and walking about. Saturday I pronounced him well, and discontinued my visits.

It is interesting to note the Nuclein was commenced at a time when there was the most danger—temperature 105°, pulse 130, and delirium. The improvement was simultaneous with the use of the medicament! If the Nuclein did not assist in this process, it certainly did no harm. After resolution was fully established the Nuclein had no effect upon temperature or pulse.

Doctor Vaughan has proved by experiment on animals* that: "Rabbits and guinea-pigs may be protected against virulent cultures of the diplococcus of pneumonia by previous treatment with hypodermatic injections of a solution of yeast Nuclein; that the immunity thus secured is not due to the action of the Nuclein as a germicide directly; the process of securing this immunity is an educational one and most probably depends upon the stimulating effect of the Nuclein upon some organ whose function it is to protect the body against bacterial invasion. This process can be explained by the fact the subcutaneous injections of Nuclein increase the number of white blood-corpuscles."

The researches of Metschnikoff, Kossel and others prove that the polynuclear white

*Professor Vaughan's papers, "Nucleins and Nuclein Therapy," "Nature of the Germicidal Constituents of Blood."

corpuscles are the defenders of the system against the invasion of disease germs, and their action seems to be explained by the fact, set forth by Doctors Vaughan and McClintock, that the germicidal substance in the blood is the nuclein found in the white corpuscles. With these facts clearly established we can understand how the consolidated lung so quickly cleared up.

WM. C. STEVENS.

College of Medicine and Surgery,
Detroit, Mich.

PHOSPHATE OF LIME IN THE PLACENTA.

Editor MEDICAL AGE:

Mrs. W——, primipara, was confined without peculiar incident. The placenta on the maternal side felt rough by reason of numerous concretions of phosphate of lime the size of a small shot. Three cotyledons seemed composed of this material imbedded in a fibrinous stroma—one was excavated on the maternal aspect, leaving a cavity incased by this concretion.

The child appears healthy, also the mother. I removed one cotyledon, and, after immersing in alcohol twenty-four hours, cut sections for the microscope and examined both in natural state and after staining; also submitted a portion to the action of nitric acid. All the examinations confirmed the above expressed opinion of this anomalous structure.

This is the first time during thirty-five years of practice that I have seen such a "lusus naturæ." Have others ever noticed a like condition? I have preserved a portion of this cotyledon for further examination should occasion require.

H. W. ALLEN.

Boulder, Colorado.

TAKA-DIASTASE.

Editor MEDICAL AGE:

I have read with pleasure your remarks upon Taka-Diastase. I recently employed this new ferment in a case of diabetes mellitus, being desirous of ascertaining its influence on the amount of sugar, and its effects on the disordered digestion of my patient. The percentage of sugar remained the same, but a marked improvement in digestion took place—especially of bread-stuffs which I had allowed him to have. As an intestinal ferment I believe Taka-Diastase will prove far more valuable than trypsin.

JOSEPH A. HORIGAN.

Kansas City, Mo.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., SEPTEMBER 10th, 1895.

Editorial.

DEATH FROM COCAINE.

Recently in England was held an inquest as to the cause of death of a lady who for years had been under medical care suffering from a disease which induced excruciating torture, complicated moreover with neuralgia of the face and gums. A year before a physician had prescribed for her a solution of Cocaine, giving directions to apply it to the gums on cotton wool, but without specifying any definite quantity for the application. Just prior to her death she was heard to cry out, but, with the exception of uttering the word "*Cocaine*," was unable to speak; she died half an hour later.

Before the coroner's jury there was some dispute as to the exact quantity of Cocaine that, taken internally, would cause death. The physician who prescribed the solution, which was of a strength of but two per cent., declared the dose the patient could have employed on the cotton wool would in the majority of instances be practically harmless; yet he was called to see her just prior to her demise, and found her in a state of collapse, death taking place shortly afterwards, which manifestly in his opinion was due to the Cocaine. The jury found a verdict of "Death by misadventure."

The foregoing evidences that too much care cannot be employed in prescribing this drug, especially for application to mucous membranes. This is by no means the first fatal result which has occurred from the self-employment of Cocaine even in very minute quantities. Finally, the words recently uttered

by Doctor Mattison in the *American Medico-Surgical Bulletin* are worthy of the utmost weight—being to the effect that the evidence to prove Cocaine a poison is now so ample that no excuse will avail to exonerate the individual who, not heeding the lesson taught by the gruesome record, fails to employ the drug with all the caution its toxic energy demands. "It is peerless for good in certain conditions, but its power for ill must never be lost sight of, if one would conserve the best interest of those on whom it may seem wise to use it."

INFANTILE SCORBUTUS.

This was recently the subject of discussion at the Montreal Medico-Chirurgical Society, when Doctor Blackadder gave his experience with the malady in an infant twelve months old. The patient was ordered orange-juice diluted with water and sweetened slightly, in tablespoonful doses; artificial foods stopped, and a mixture of creamy fresh milk and thin barley-water substituted; once a day a dessertspoonful of the red juice of a lightly broiled steak. Three days later the infant was almost well; tenderness on movement had disappeared, and the second night after change of food was the quietest and most comfortable of the little creature's life. Eight days after the infant was first seen the gums were perfectly healthy. Now were given iron and cod-liver oil, and a little carefully mashed potato added to the diet. In a few days the child was a "perfect picture of health."

Another child, a month younger, under like treatment evinced an equally speedy and satisfactory recovery.

It may here be said that the so-called "infant foods," so far as the latter half of the title is concerned, are a delusion and a snare, and responsible for a large share of the mortality that obtains among nurslings. Most mothers can, *if they will*, nurse their offspring, and no true mother will delegate the rearing of her child to patent diets and the nursing-bottle; but if the latter is imperative, good cows' milk diluted one-half with barley-water, or for a change oatmeal-water, in the proportions of 1 to 2, or 1 to 3, will prove far superior to any patent price-taking "infant food," which oftentimes consists chiefly of cane sugar, washed starch or flour, and water.

VERITAS VINCIT.

The wrangle in the Washington (D. C.) courts between the "Great Retired" and other members of the so-called Columbia Chemical Company, has pretty thoroughly aired the inside workings of the Animal Extract business. Though well aware that by so doing we are giving the "*Only Great*" an undeserved amount of gratuitous advertising, we feel it only just to present the last phase in this imbroglio.

The Columbia Chemical Company, in answer to allegations advanced by the "Great Retired," declares "said allegations are untrue and false," and that—

> This defendant will now proceed to state the true facts; that . . . after December, 1893, at which time the present officers came into control of the Company, they were unable to obtain from the said Hammond said extracts except in small quantities, or about a gallon at a time; that the charge had been brought against the extracts that the said Hammond in the preparation of them used nitro-glycerin, a highly deleterious and injurious compound; that the said charge had been publicly made . . . and was highly injurious to the sale of said extracts. That this defendant protested against the use of any nitro-glycerin by the said Hammond, but the said Hammond denied that he did use nitro-glycerin; but this defendent had reason to suspect and did suspect that the said denials by the said Hammond were untrue, and the said defendant for its own protection and for the protection of the public caused several analyses to be made of one of said animal extracts by one Geisler, the official chemist of the Mercantile Exchange of the City of New York, and the said Geisler reported to the defendant that he had found nitro-glycerin in said extract; that this defendant showed the letter to the complainant Hammond and protested against his having put nitro-glycerin in said extract; that the said Hammond secured possession of the letter from the said Geisler, shown by defendant, and took the same away with him, and denied that there was any nitro-glycerin in the said extracts, but this defendant thereupon procured a copy of said letter from the said Geisler, and herewith files a copy of said letter marked "Exhibit D," and refers to the same and prays that it may be taken as a part of this answer.

(EXHIBIT D.)

Office and Laboratory, Joseph F. Geisler, Ph.C., F.C.S.,
Analytical and Consulting Chemist,
New York Mercantile Exchange Buildings,
Corner Hudson & Harrison Streets.
NEW YORK, July 9th, 1894.

M. LANZA,
Columbia Chemical Company, Washington, D.C.:

DEAR SIR: I have kept you waiting rather longer than I expected to in reference to the report on the examination of the six bottles of Cerebrine obtained

from Milhau's, 183 Broadway, New York. The bottles were from the regular stock and obtained by myself on June 7, '94. My efforts during the past two weeks have been directed to disprove, if possible, the results I had obtained in the analysis of the above samples, but without success. I can therefore report that, working with pure chemicals and eliminating all sources of error, I obtained satisfactory reactions as to the presence of nitroglycerin in Cerebrine, not only from the Cerebrine direct, but also, and more perfectly, from the ether extract of the same. I have, therefore, no longer any hesitation in stating that the samples of Cerebrine examined contained nitroglycerin or a closely analogous substance.

Yours truly,

(Signed:) J. F. GEISLER.

True Copy.

Test: (Signed:) J. R. YOUNG, *Clerk*.

By W. B. WILLIAMS, *Ass't Clerk*.

The Washington *Post* for August 23d adds, the decision of the court has been wholly in favor of the Columbia Chemical Company as against the "Great Retired," his son-in-law Manfredi Lanza, and the "Animal Extract Company"—which latter appears to be a new organization (see page 533).

In the case of the Columbia Chemical Company against the Sanitarium Company as to why the latter should not be punished for contempt on account of failure to observe the restraining order of July 25th, the court imposed a fine on Lanza, who was further adjudged guilty of contempt.

We trust our non-secret and Wile(y) friends in Detroit and Danbury, Ct., respectively, who fairly tumbled over each other in eagerness to uphold Animal Extracts and the "Great Retired," are proud of the company they so sedulously cultivated!

FOOD FOR THOUGHT.

Orthodox medicine for a half-century has sedulously ignored that wing of the profession known as Homœopathic; and yet the fact remains that to this body of practitioners medicine owes many debts, not the least of which are palatable therapeutics, and the administration of remedies for their continuous effects. Homœopathy has won many men of the highest standing to its ranks, and this truth cannot be downed by the cry of charlatanism. A natural query, then, arises as to whether more is hidden behind the title than appears on the surface. Is it possible homœopathy embodies a natural law in therapeutics that is entirely ignored by us of the more orthodox branch?

The foregoing is suggested by the utterances of an "Old Correspondent" in the editorial columns of the *Provincial Medical Journal*—the editor of which, Doctor Thomas Dolan, is far removed from any possible charge of medical heresy—as follows:

The frequent opening of new homœopathic hospitals, with attached dispensaries, in the large towns, and the widespread popularity of these institutions, has caused me to reflect anew on the causes of such facts. The profession should desire to seek the true cause, apart from all professional jealousy or animosity, for we may be quite sure such facts have some true foundation in the order of nature. The first thought that arises is that the divine instinct, even of the most ignorant of mankind, reveals to them that disease must be orderly and subject to law. Secondly, the same divine instinct makes men feel that the most delicate and infinitesimal changes in the organism are great and potential in their results, being parts of universal laws. The first reflection noted raises the hope that disease conditions are preventable and curable; whilst the second convinces men that the means to this end may be infinitely small; thus mankind, when in an imperfect stage of education, is sure to embrace hypothetical systems of nature, and to put faith in remedies based on wide but purely fanciful hypotheses. At any rate, whether this statement of the position be intelligent and pat to the circumstances or not, there must be some kind of naturo-historic foundation and explanation of the widespread belief in homœopathy. To make this clearer, may be cited the fact that the wildest speculations and experiments of the alchemists throughout many centuries were in absolute philosophic and scientific continuity with the splendid accuracy and results of modern chemistry and physics. Every great division of science has had its long-existing, pre-stage of obscure and fanciful hypotheses, and I think the homœopathic theories and practice will have a place in the historical development of our future and more scientific therapeutics. One is less surprised at the popularity of homœopathy when he reflects that biology has only in this generation, even in our greatest universities, been held to be completely within the domain of accurate and searching science. Younger men, in the freedom of the present day, can in no sense realize the bitter opposition and obloquy which attached to logical scientific biology prior to the days of Darwin. It will, however, be many generations before even educated minds, not to refer to the masses of the people, are rightly suffused with a true philosophy of biology. And if biology be so inadequately grasped, *a fortiori* pathology must be vastly more a region of conjecture and wild hypotheses. Again, the labor of study and discipline of mind, essential in order to

form right biological conceptions, is pressed out of the education of this country owing to the paramount necessities of commerce; hence it is but natural that a large portion of the semi-educated community should attach their faith to such hypotheses as homœopathy embraces, and which profess and present to the uninformed mind the captivating qualities of a completed system. It must further be remembered that orthodox medicine is still very much bound by the chains of the *names of diseases*. The public mind has thus been trained to view diseases as so many entities, and hence it is fitted to receive the impress of the homœopathic teaching—that each symptom and each disease has a specific existence and a specific remedy. But of late years the profession has been very much surprised and gratified to find the very widest and most just views of biology are being taught in schools to which every section of the community has access; and we are full of faith that ere long great light and knowledge will pervade the mind of the country, and great and just views will prevail on biology, and *a fortiori* on pathology and therapeutics.

A CENTURY AND A QUARTER OF LIFE.

French and Russian journals recently announced the death of Nicholas Savin, upwards of a century and a quarter of age. There is apparently no doubt as to the authenticity of the case.

It seems that this man, who arrived within measurable distance of doubling the usual span of life, was born in Paris in 1768. Twenty years later he enlisted as a hussar, and ultimately took part in most of the important campaigns under the Consulate and the first Empire. During the retreat from Moscow, and while attempting the passage of the Beresina, he was wounded with a lance, taken prisoner by a detachment of Cossacks, and confined at Saratov. Having recovered, he was allowed the liberty of the city under parole, and speedily fell a victim to Cupid's dart, with the consequence that *la belle* France was forgotten and he became a resident of this Russian city, which continued to be his home for upwards of eighty years. In 1887 the Emperor Alexander III., learning his history, sent him a present of a thousand roubles ($500), together with a congratulatory message which the veteran hussar valued more than money. Up to his death, which took place in the latter part of last year, Savin enjoyed excellent health and retained full possession of his faculties. It is said he left one daughter to mourn his loss —a tender maid of seventy-eight years.

A century and a quarter is certainly a long life in these days of civilization, and Russia would appear to be the ideal land in which to attain such a patriarchal age, especially for a broken-down soldier or reformed bandit.

A recent dispatch from St. Petersburg records the death of a native of Samara by the name of Efimovin, who was a quarter of a century older than Savin, and who, if the report is true, belonged to a band that ravaged the eastern provinces and was a constant source of terror during the reign of Catherine II., under the leadership of one Pongatchev. With the death of the latter, Efimovin became chief of the banditti, but was finally captured and expiated his crime by thirty years of banishment in Siberia, when he was permitted to return to Russia. His death, in his one hundred and fifty-first year, occurred in April, 1894, and for a few years previous he had been totally blind.

EDITORIAL NOTES.

Index Medicus.—

The list of subscribers to the special fund up to September 5th, 1895, inclusive, is as follows:

New York State Library, per Melvin Dewey, Albany, N. Y.	$25 00
A. Vander Veer, M.D., Albany, N. Y.	25 00
Medical Department University of Michigan, per Victor C. Vaughan, M.D., Dean, Ann Arbor, Mich.	25 00
Chas. O'Donovan, M.D., Baltimore, Md.	25 00
Wm. Osler, M.D., Baltimore, Md.	25 00
H. A. Kelly, M.D., Baltimore, Md.	25 00
L. McLane Tiffany, M.D., Baltimore, Md.	25 00
I. E. Atkinson, M.D., Baltimore, Md.	25 00
W. S. Halsted, M.D., Baltimore, Md.	25 00
Henry M. Hurd, M.D., Baltimore, Md.	25 00
Medical Society Kings County, per W. Browning, M.D., Brooklyn, N. Y.	25 00
F. W. Henkel, M.D., Buffalo, N. Y.	25 00
P. S. Conner, M.D., Cincinnati, Ohio.	25 00
F. Forchheimer, M.D., Cincinnati, Ohio.	25 00
Cincinnati Hospital Library, Cincinnati, O.	25 00
Colorado Medical Library Association, Denver, Colorado.	25 00
J. P. Johnson, M.D., Galveston, Texas.	25 00
Royal College of Surgeons, London, Eng.	25 00
Orleans Parish Medical Society, per S. W. Deland, New Orleans, La.	25 00

S. E. Chaille, M.D., New Orleans, La.....	25 00
John B. Elliott, M.D., New Orleans, La...	25 00
Edmond Souchon, M.D., New Orleans, La..	25 00
Rudolph Matas, M.D., New Orleans, La. ..	25 00
Fred H. Wiggin, M.D., New York City, N. Y.....	25 00
G. T. Jackson, M.D , New York City, N. Y.	25 00
J. S. Thacher, M.D., New York City, N. Y.	25 00
John A Fordyce, M.D., New York City, N. Y.	25 00
St. Lawrence State Hospital, Ogdensburg, N. Y.....	25 00
Charles E. Sajous, M.D , Paris, France ...	25 00
John B. Roberts, M.D., Philadelphia, Pa...	25 00
E. E Montgomery, M.D , Philadelphia, Pa.	25 00
J. C. Wilson, M.D., Philadelphia, Pa.....	25 00
William Pepper, M.D , Philadelphia, Pa ...	25 00
DeForest Willard, M.D., Philadelphia, Pa..	25 00
S. Weir Mitchell, M.D., Philadelphia, Pa...	25 00
George M. Gould, M.D., Philadelphia, Pa .	25 00
H. C. Wood, M.D., Philadelphia, Pa.....	25 00
Quincy Public Library, Quincy, Illinois....	25 00
Hunter McGuire, M.D., Richmond, Va	25 00
John O Roe, M.D., Rochester, N. Y.....	25 00
S. H Pinkerton, M.D., Salt Lake City, Utah.	25 00
American Medical Publishers' Association, per Charles Wood Fassett, Secretary, St. Joseph, Mo.....	25 00
San Francisco Medical Society, per D. W. Montgomery, M.D., San Francisco, Cal...	25 00
E. L. Trudeau, M.D., Saranac Lake, N. Y..	25 00
Henry L. Elsner, M.D., Syracuse, N. Y....	25 00
Medical Department U. S. Army (10 copies), Washington, D. C.....	250 00
Library Surgeon-General's Office (2 copies), Washington, D. C.....	50 00
Medical Department U. S. Navy (2 copies), Washington, D. C.....	50 00
U. S. Marine Hospital Service (1 copy), Washington, D. C.....	25 00
	$1500 00

Removed.—

The ever staid and respectable *Medical and Surgical Reporter* has forsaken the "City of Brotherly Love" and transplanted itself to Gotham. Whether it will flourish better in the metropolis of the "Empire State" than in that of Pennsylvania remains to be seen. In the meantime we wish it all prosperity and success, for it is one of the few periodicals that lend tone and character to medical journalism.

Remember!

All the antacids and other drugs which require for the acme of effect and activity to be brought in direct contact with the stomach, can be administered in no way so conveniently and effectively as by means of empty capsules. The contents are readily set loose in the presence of the gastric fluid, inasmuch as the cap of the capsule becomes quickly softened at its edges, and retracts and everts itself.

The Mississippi Valley Medical Association.—

This organization on Friday last closed a most successful four days' session in Detroit. The number of papers presented was utterly overwhelming, and many could be read only by title. The officers for the ensuing year are: H. O. Walker, Detroit, President; W. B. Ricketts, Cincinnati, and F. C. Woodburn, Indianapolis, Vice-Presidents; Hanau W. Loeb, St. Louis, Secretary; Harold N. Moyer, Chicago, Treasurer.

Eczema of Glans Penis.—

Doctor Wm. Frick, of Kansas City, reports two cases of this somewhat rare affection. He believes them to have been eczematous merely, but personal experience evidences such are usually an obscure manifestation of syphilis, and more often found when the initial lesion is situated within the urethra.

A Neglected Alkaloid.—

In the Pharmacology Section of the British Medical Association, Sir William Roberts recently read a paper on Anarcotine, which, according to his showing, represents the antimalarial properties of opium, and in many cases is decidedly more efficacious than quinine as an antiperiodic.

Where was the Antitoxin?—

A case of recovery from tetanus, treated by antitoxin, is reported in the *British Medical Journal*. Incidentally, however, it is noted that the wounded finger was amputated and *bromides, chloral hydrate, and morphine* freely administered!

Appropriate!—

One of our lay contemporaries speaks of "Diphtheria Antitoxin at the Congress of *Infernal* Medicine." Italics ours, of course.

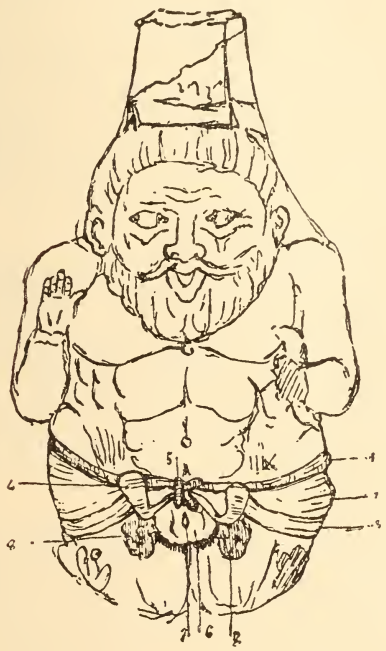
A Discovery in Lettuce.—

Hyoscyamine has been found in this kitchen-garden product in the proportion of 0.02 per cent.

Items and News.

A Carthaginian Truss.—

An interesting description is given in a French medical contemporary of a statue which has been discovered at Sousse, (ancient Hadrumeta), in Tunis, which, according to several experts, represents the god Bès, a second-class divinity of Egyptian mythology.



1. Upper band. 2. Middle band of cloth. 3. Lower band. 4. Oblique metallic pad terminating in a bent shank. 5. Knot and rosette. 6. Scrotum. 7. Urinary orifice. 8. Femoral hernia.

This statue to all appearances dates from the Phœnician epoch, 900 years B. C. The medical interest of the figure centres in the apparatus worn by the god, which without doubt is a double inguinal truss, consisting of a belt, on each side of which is fixed a pad inclining a little obliquely both downwards and inwards. According to the diagnosis of M. Poncet, the statue also shows two femoral herniæ, two omental scrotal herniæ, and a most interesting peculiarity, viz., a very admirably sculptured urinary meatus such as those observed in the subjects of large herniæ. Several hypotheses are put forward to account for the appearance of these surgical features in the statue. Was it dedicated to the god by a grateful patient, or was it merely used by a manufacturer of Carthage as an advertisement for his wares?—*Pacific Medical Journal.*

A Rare Surgical Operation.—

Woman's skull opened, brain lifted up, and muscles cut from the face. Doctor J. S. Pyle, assisted by Doctors Harmount, House, and Kelly, performed a very delicate operation at the Aultman Hospital yesterday morning. Mrs. William Lehnis, of 216 East Tuscarawas street, has been suffering for the past six months with a very severe attack of trifacial neuralgia. The left side of her face was so badly affected that if she started to talk it would cause her intense pain. It was decided to remove the muscles which caused the pain, as an only means of affording relief. A V-shaped piece of scalp was laid back extending from the base of the ear to the eye, and up to about two inches over the eye and back to the ear. The skull was then drilled through and pulled back, leaving the brain exposed. The brain was lifted, and this exposed the trifacial muscles. These were cut off and removed, the brain let down in position, and the bones of the skull pushed back. The scalp was then sewed up. The patient is feeling well this morning and the neuralgia is entirely gone. This is only the sixth time the operation has been performed in the United States, and then it has only taken place in New York and Philadelphia.—*Canton (Ohio) News.*

The Animal Extract Imbroglio.—

It is a matter of some interest to physicians to learn that the Columbia Chemical Company, of Washington, D. C., in their litigation with William A. Hammond, have come out ahead. The courts have restrained Hammond, the Hammond Sanitarium Company, Mahlon Hutchinson, and Hammond's son-in-law M. Lanza, from manufacturing, advertising or selling the animal extracts. It appears Hammond sold the sole right to these products, together with the use of the name, to the Columbia Chemical Company, but endeavored later to give the right again to the Sanitarium Company, in which he is a large stockholder. The Columbia Chemical Company, however, have fought the case with vigor, and have had their rights, under their contract with Hammond, upheld in every particular by the courts. During the proceedings in court it developed that the formula of the animal extracts *is a secret, held only by Hammond and the Columbia Chemical Company.—Times and Register.*

A National Disgrace.—

The unrestricted traffic in nostrums is a disgrace to civilization. Communities and States are up in arms against alcohol as a

beverage in all its forms, except the one most detestable and villainous. Introduce some vile ingredient into the alcohol, christen and label it as a patent or proprietary medicine, and, lo! it is robed in innocence and welcomed to the homes of the righteous. A poison can be legally sold as such in most States only with a flaring label of warning, and after double or triple forms of registration by a competent pharmacist. Put it up as a medicine, decorate it with a seductive title and a rainbow wrapper, and at once it is beyond the restraints of regulation, and may be sold by street hawkers, slaughter-shops, anybody and everybody, without let or hindrance. Where is the consistency, the intelligence, the justice, in this strange partiality for the nostrum curse?—*Western Druggist.*

Woman and the Bicycle.—

Much has been written recently about the effect on women of bicycle-riding, and one writer mentions a case wherein the hymen was ruptured on the bicycle saddle. The *Journal* knows of an instance where a little girl ruptured her hymen in the act of riding a broomstick "boy fashion." Science must not be too exact in its investigations of the physiological and pathological phenomena produced by modern inventions for inducing the physical development of our girls. After all, science is frequently but an imitator of primitive nature. Who knows but what the graceful tandem bicycle was suggested by that rustic couplet—

> A hick'ry stick and a white oak saddle,
> Two little gals a ridin' straddle.

—*Journal of the Arkansas Medical Society.*

Rank Villainy.—

John R. Mullen, of Alexander, Genesee County, N. Y., advertised for sale a diploma that belonged to his late father, issued by the Castleton Medical College, of Vermont. The matter was referred to the Board of Regents of the University of the State of New York, and they have commenced proceedings against Mullen for infraction of the law, which makes such a thing a misdemeanor. During the investigation it was discovered that there had existed a regular traffic in such diplomas.—*The Dental Practitioner.*

A Parisian Medical Quarrel.—

Doctors Proust and Roux are at present engaged in a bitter controversy concerning the merits of diphtheria antitoxin; a child died soon after receiving an injection, and Doctor Proust said the death was due to the remedy. The controversy grew so acute that some of the participants even forgot their patriotism and asserted that the serum treatment was a German discovery anyway, and Roux simply appropriated it without warrant and proclaimed it as his own.—*Medical Record.*

A Good Resolve.—

Never pass a sound into the uterus without first demanding a full history of menstruations; attention to this rule will often prevent tendering the designing patient a cheap abortion. Even with a clear history, remember the rule of the elder Goodell: "Cervix hard as the tip of your nose, no pregnancy exists; cervix soft as your lips, pregnancy almost certain to exist."—*Canadian Medical Review.*

Advertising Dishonesty.—

In the publishers' department of the *Maryland Medical Journal* of July 13th, Doctor Frank McDonald, of Pittsburg, is made to say: "Your Succus Alterans gives me perfect results. I prescribe it almost daily," etc. In view of the fact that Doctor McDonald *has been dead several years*, this is certainly startling news!—*Pittsburg Medical News.*

Docking.—

The operation *is needless, painful*, and *cruel*, causing the horse much suffering, and depriving it of its only means of defense against flies and insects. In my opinion *no language too strong can be employed condemning this cruel operation.* — Doctor Samuel K. Johnson, Surgeon New York Veterinary Hospital.

Rationalism in Medicine.—

Doctor Alfred H. Carter says that the whole fabric of rational medicine rests upon a tripod, of which the three divisions are: clinical observation and study of the signs and symptoms of disease; study of the pathological seats and processes; study of remedies.—*British Journal of Dental Science.*

Hints as to Tinned Foods.—

Canned fruits and vegetables should be opened an hour or two before being used. In this way they become richer, as the oxygen of the air, driven off at the time of sealing, is restored.—*New York Medical Times.*

Palatable Cod-liver Oil.—

"The pleasantest way to take cod-liver oil," says an old gourmand, "is to fatten pigeons with it, and then eat the pigeons."—*Tid-Bits.*

Book Reviews.

LITTELL'S LIVING AGE. Price, 20 cents; $8.00 a year. Littell & Co., Boston.

The following is a partial table of the contents of the August numbers: "Recent Science," by Prince Kropotkin; "The Letters of Coleridge," by Andrew Lang; "The Grave of the Druids," by Harrison Barker; "Unconquered Mithras," by Thomas H. B. Graham; "Glimpses of Some Vanished Celebrities," by F. M. F. Skene; "A Drive from Paris to Nice," by E. Johnson; "Color Music," by William Schooling; "Intellectual Detachment," by Sir Herbert Maxwell; "England and France in the Nile Valley," by Captain F. D. Lugard; "Mr. William Watson's Serious Verse," by Laurie Magnus; "Formosa," by a native of that island; "Labrador;" "Our Last War with the Mahsuds," by S. S. Thorburn; "Ireland Revisited," by Lord Houghton; "Lord Camelford," by Charles Bruce-Angier; "Robert Burns;" "Old Italian Gardens," by Vernon Lee; "My Native Salmon River," by Archibald Forbes; "Religious Movements in India," by Banda Khuda; "Cranford Souvenirs," by Beatrix L. Tollemache; "Mental Work," by Guillaume Ferrero.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 per year. Harry C. Jones, New York.

Contents for September are: "The School of Venice," by Alfred Trumble, illustrated by Vincent G. Stiepevich; "Joseph Jefferson, the Painter," by Glen MacDonough, illustrated from paintings by Jefferson; "The Sway of the Crinoline," by Helen Ingersoll; "Barnstormers," by Edward Payne; "In the Suburbs of Munich," by Hugh H. Lusk; "First Impressions," by Marguerite Tracy, illustrated by Eugene Meeks; "Jean Valjean," by Victor Hugo, illustrated by Bayard, Brion, DeNeuville, Lix, and Vogel; "Animal Painting," by Clarence Cook; "Cuxhaven to Constantinople," by C. W. Allers; "Memoirs of a Miniature-Painter," by Thomas S. Cummings; "Pottery of the American Indians," chapter v, by W. J. Hoffman, M.D.

NORTH AMERICAN REVIEW. Price, 50 cents; $5.00 per year. North American Review Company, New York.

The September number presents a table of contents wide in range and most authoritatively treated. Right Reverend William C. Doane tells "Why Women Do Not Want the Ballot;" Admiral P. H. Colomb, R. N., discusses "The Evolution of the Blue-jacket;" Sir William Flower throws light upon the private life of Professor Huxley; Max O'Rell wittily gives his opinion of "The Petty Tyrants of America;" "A Brush with the Bannocks" is by General Nelson A. Miles; "The Personal History of the Second Empire," by Albert D. Vandam, deals with the "intrigue and corruption" of that period; "The Situation in Cuba" is described by Señor Segundo Alvarez.

THE ECLECTIC MAGAZINE. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

There is an exceptionally fine collection from current English periodicals to be found in the September number, notably "The Origin of Man and the Religious Sentiment," by A. Fogazzaro; "Advertising as a Trespass on the Public," by Richardson Evans; "The Origin and Growth of Trial by Jury in England," by J. E. R. Stephens; "In Praise of Convention," by A. Clerk; "Night Scenes in Chinatown, San Francisco," by W. H. Glendell; "Roadside Singers and Covert Warblers," a most interesting ornithological sketch by a "Son of the Marshes;" "Aftermath," by W. J. Locke. Three particularly interesting anonymous papers are "Cabbages and Kings," "In Vintage Time," and "Nicotiana."

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

Contents for September: "Liverpool Today," by Robert Machray; "For Humanity's Sake," by William Lewis Edmonds; "Sir John Thompson," by O. A. Howland, M.L.A.; "Some of the Fruits of Education," by David O. Lewis; "Ducks and Duck-shooting," by Stuart Jenkins; "The Financial Incidents of War," by A. C. Galt; "St. Skea," by K. Bradshaw; "Our Cash Reserves," by James B. Peat, M.A., LL.B.; "Daniel W. Powers," by W. A. Sherwood, A.R.C.A.; "Canoe Song," by J. C. Bell; "Verses and Versions," by A. G. Doughty; "Current Thoughts;" "In Various Moods;" "Gable Ends;" "Books and Authors."

MCCLURE'S MAGAZINE. Price, 10 cents; $1.00 a year. S. S. McClure, New York.

Of the manuscripts left unpublished by Robert Louis Stevenson at his death, the first to reach the public is a collection of very original "Fables" in the September *McClure's*. In this issue also Anthony Hope relates another adventure of "Princess Osra;" there is a romantic tale of court intrigue by Stanley J. Weyman; a new "Drumtochty"

story by Ian Maclaren; a review of a story of Maclaren's, by Elizabeth Stuart Phelps; an account of Will H. Low and his work, by Cleveland Moffett. In addition, Garrett P. Serviss gives an account of amateur mountain-climbing. There is also an account of John Kelly's resuscitation of Tammany.

THE COSMOPOLITAN. Price, 10 cents; $1.20 a year. Cosmopolitan Publishing Co., Irvington-on-Hudson.

Fiction and travel are the strong points of the September number. "In the Realm of the Wonderful" is by Charles B. Hudson; "The Ancient Capital of Cuba," by John T. Hyatt; "Brigham Young and Modern Utah," by John A. Cockerill; "A House Party at Abbortsford," by Nina L. Smith. H. H. Boyesen writes of "The Nixy's Chord;" George C. Holt of "A Famous Crime;" "A Three-Stranded Yarn," by W. Clark Russell, is continued; "Tempted by the Devil" is by A. Conan Doyle. There are the usual departments of "In the World of Art and Letters," and "The Progress of Science."

OUTING. Price, 25 cents; $3.00 a year. The Outing Publishing Company, New York.

Canadians especially will find much to interest them in the September issue—a beautifully illustrated number. In "The Seigneur's Shooting Party," Gertrude Cundill portrays life in the Province of Quebec. In "Paw Ducket's Coon-Hunt," E. W. Sandys is at home in the woods of Ontario; in "True Canoeing," R. B. Burchard shows the advantage of the old-style meets, and in "On and In the Ottawa," Wm. Thomson describes the capture of a big *masq'allonge*. Other attractive features are "The Cup Champions and their Crews," "Family Camping," and "International Athletics for 1895."

THE CENTURY. Price, 35 cents; $4.00 per year. The Century Co., New York.

The September issue contains three complete sketches by popular American writers, representing three different sections of the country. Mary Hallock Foote contributes a powerful story of mining life in the far West, entitled "The Cup of Trembling;" Sarah Orne Jewett contributes a humorous story of the New England coast, entitled "All My Sad Captains;" and "The Gum Swamp Debate" is by Harry Stillwell Edwards. This number contains the last installment but one of Marion Crawford's "Casa Braccio." There is also the conclusion of "The Princess Sonia," by Julia Magruder.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The contents of the September issue are: "The History of the Last Quarter-Century in the United States," chapter VI, by E. Benjamin Andrews; "Au Large," by Henry van Dyke; "Country Clubs and Hunt Clubs in America," by Edward S. Martin; "The Amazing Marriage," chapters XXXII–XXXVI, by George Meredith; "The Wild Geese," by James H. Morse; "Photography in Fiction," by Alexander Black; "The Art of Living," by Robert Grant; "The Wheel of Love," chapters VII–XII, by Anthony Hope; "Like to a Songless Bird," by M. L. van Vorst; "The Point of View," etc.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The September issue contains the first installment of a three-part story, by Charles Egbert Craddock, entitled "The Mystery of Witch-Face Mountain." The second of Doctor John Fiske's historical papers is "John Smith in Virginia." Bradford Torrey contributes a Tennessee sketch entitled "Chickamauga;" James Schouler writes of "President Polk's Administration." The usual installments of the two powerful serials now running appear in this issue. William C. Lawton writes of "The Plot of the Odyssey." "Guides: A Protest," is by Agnes Repplier.

THE PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 a year. Fowler & Wells Company, New York.

The September issue opens with a phrenograph of "Elizabeth Cady Stanton," by Edgar C. Beall; "How Three People Did Europe Afoot" is by George Bartlett; Stanley Hunter inquires, "Is there a Science of Character?" C. F. Wells writes of the "Reverend Joseph Warne;" H. S. Drayton discusses "The Science Relation;" Nelson Sizer has his accustomed chapter on "Child Culture." There are the usual notes on Anthropology, Editorials, Answers to Correspondents, etc.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 a year. J. B. Lippincott Co., Philadelphia.

"A Case in Equity," by Francis Lynde, is the complete novel in the September issue. "Morning Mists" is by Julian Gordon; "How the La Rue Stakes were Lost," by Charles N. Hood; "A Mute Milton," by Helen F. Lovett; "Napoleon and the Regent Diamond," by Charles S. Pratt; Ellen Duvall writes on "Molière," Edward Fuller of "The Decadent Drama," and Calvin D. Wilson about "Crabbing."

THE AMERICAN NATURALIST. Price, 35 cents; $4.00 per year. The Edwards & Docker Co., Philadelphia.

The September number contains: "The Present Standing of the Florida Manatee in the Indian River Waters," by Outram Bangs; "New Classification of Lepidoptera" (continued), by A. S. Packard; "Deviation in Development due to Unripe Seed," by J. C. Arthur; "The Effect of Female Suffrage on Posterity," by James Weir, Jr. There are the usual "Editor's Table," and general notes on Mineralogy, Geology and Paleontology, Botany, Vegetable Physiology, Zoölogy, Embryology, Entomology, Psychology, and Anthropology.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Co., New York.

The September number contains: "The Pleasures of Yachting," by J. A. Locke; "Amateur Photography," by F. W. Crane; "A Flesh-and-Blood Story," by J. B. Reynolds; "Griselda's Cross," by Frank Chaffee; "On a Mecca Prayer-Rug," by Lucy Cleveland; "Mojave, the Phantom City," by E. J. Carpenter; "The Stage and the Church," by Beaumont Fletcher; "The Cuban Revolution," by Rupert Hughes; "A Rajput of Rajputana"—VII–IX,—by H. W. French.

THE ROYAL NATURAL HISTORY. By Richard Lydekker, B.A., F.R.S., F.Z.S. Volume I, No. 4; paper; royal 4to; pp. 96. Price, 50 cents. Frederick Warne & Co., New York.

The two colored plates of the issue for June 15th represent respectively those rare creatures known as linsangs and the web-footed shrews. Chapter XI completes the history of the bats—insectivorous, smooth-nosed, sheath-tailed, pouch-winged, hare-lipped, long-tailed, wrinkled-lipped, naked, mastiff, white and tomb bats,—also the vampires, both harmless and blood-sucking.

Chapter XII opens with the history of the order Insectivora, and deals with the codego, tree-shrews, jumping-shrew, hedge-hogs, common shrews, water-shrews, musk shrews, burrowing shrews, and the different moles.

Chapter XIII is the beginning of the history of the order of Carnivora, the first place being given to the *Felidæ*, and chief among the cat tribe are the lions, a full-page illustration of which is given, and likewise a full skeletonian description. Too much cannot be said in praise of the portraiture of the lion tribe. Then follows the history of the tiger, which will be continued in the issue of August 1st.

The further along this series gets, the greater its appreciable value.

SCIENCE AND ART OF OBSTETRICS. By Theophilus Parvin, M.D., LL.D. Cloth; 8vo; pp. 677. Price, $4.25. Lea Brothers & Co., Philadelphia.

The recognized position of this volume is shown in the thus early call for a third edition. In no other department of medical science is it more necessary to exhibit clear, definite, comprehensive and authoritative knowledge; and in an appreciation of this fact lies the remarkable success of this work. Professor Parvin's experience as an obstetrician and teacher, and his recognized literary aptitude, endow this volume with the qualities essential for both practitioner and student. The third edition is the result of thorough revision, in conformity with latest knowledge, and the greater portion thereof is entirely rewritten. The series of illustrations, moreover, has been greatly increased, bringing up the total number to 267, besides two colored plates.

PROCEEDINGS OF THE AMERICAN ACADEMY OF RAILWAY SURGEONS. Edited by R. Harvey Reed. Cloth; 16mo; pp. 140. American Medical Association Press, Chicago.

This is the first issuance of the Transactions by this new Society, and appears in very convenient and pleasant form, barring the fact that the type is somewhat small. Besides the Proceedings appear a list of officers, official roll of fellows, and a very complete index. There is likewise a preface by the editor in the interests of railway surgeons and surgical associations.

FROMONT JUNIOR AND RISLER SENIOR. By Alphonse Daudet. Paper; 16mo; pp. 400. The Rand, McNally Co., Chicago.

The plot of this novel is, after the prevailing fashion, unpleasant, and concerned with a tragic destruction of family life; nevertheless the story is told both artistically and purely, while the genuine humanity of the characters, the pictures of contemporary life in the middle class of Parisian society, and the flowing and transparent style, render the volume especially interesting.

DISEASES OF THE LIVER. By J. Compton Burnett, M.D. Cloth; 32mo; pp. 244. Price, $1.00. Boericke & Tafel, Philadelphia.

This is the second edition of a well known work. Doctor Burnett is a practitioner of first standing in London, England, and, though homœopathic in his tendencies, is known to be an authority in hepatic diseases. Jaundice, gall-stones, liver enlargements and cancer are very carefully considered.

Therapeutic Brevities.

New Method of Anchoring Kidney.—A perpendicular abdominal incision two-and-a-half to three inches long is made over the middle of the kidney, and the organ (being exposed) is brought into place, two long thin needles, threaded one on either end of a piece of aseptic silk or silkworm-gut, being used. The first needle is inserted through the upper and inner part of the cortical substance of the kidney, directly through the muscles of the back, coming out between the eleventh and twelfth ribs. The second needle, on the other end of the ligature, is also passed through in a similar manner, about an inch from its fellow, through the upper and outer cortical substance of the kidney; the ends of this ligature are tied on the integument. Another suture may be inserted through the outer margin of the kidney an inch below the last, the second needle passing still an inch lower and through the outer portion of the cortical substance of the kidney, the ligature, as before, being tied on the integument. Care should be taken not to draw the sutures too tightly, but only enough to hold the kidney in place and set up a little irritation. The abdomen is closed in the ordinary way. Adhesions form in from one to two weeks, when the sutures may be withdrawn. Results so far are satisfactory.—Doctor Reed, in *Therapeutic Gazette.*

Physostigmine in Glaucoma.—All glaucoma cases will bear Eserine (Physostigmine):

As the greatest use is in the prodromal stage, the physician should be especially alert, and, upon the first complaint of seeing rainbows around luminous bodies, use the drug immediately:

It works excellently, also, in acute inflammatory attacks, in which it can be used every hour; if the pupil becomes small, the attack will disappear in one or two days:

Eserine never does harm—it can be used for years once or twice daily, and slight irritation of the iris under its use is very rare:

If Eserine fails to relieve an attack, the patient should go at once to an oculist:

If the glaucoma should progress in spite of it, an iridectomy should be done, but the prognosis will be doubtful:

Follicular catarrh will only be produced by impure Eserine; care, therefore, should be taken that the drug be pure, and that the bottles, pipette, etc., employed be perfectly clean.—Doctor Herman Kohn, in *Berliner Klinische Wochenschrift.*

The Danger of Alkaline Mixtures.—Every practitioner is aware that solutions of potash and soda salts are apt to increase rather than check dyspepsia if given too long or in too large doses; they may even set up cystitis—in cases of gastric ulcer and acid dyspepsia this complication often occurs when the patient has taken a mixture of one part of calcined magnesia and four of bicarbonate of soda. At Vichy visitors who go through a course of the Source de l'Hôpital waters often have slight cystitis, and this has been observed, with hæmaturia, in a patient who took large doses of bicarbonate of soda. Du Cazal has seen hæmaturia, but never cystitis, in rheumatic subjects taking large doses of bicarbonate of soda. Hayem notes that the degree of acidity of the urine must be ascertained, in cases of acid dyspepsia, before alkalies are given, as there is no direct relation between the proportion of acid in the gastric juice and that in the urine; when the latter is feebly acid the patient may be much damaged by alkalies.—*British Medical Journal.*

Treatment of Nævus.—Doctor H. R. Wharton states the varieties of nævus most commonly met are the capillary, the port-wine mark (a form of the capillary of some size), and the venous nævus of purple or bluish color and at times containing blood-cysts. All forms of vascular tumors in young children should be carefully watched, and if any increase in size be noted they should be operated upon. In cases of capillary nævus, cauterization with nitric acid by means of a match-stick may answer; electrolysis is also of service in the treatment. The treatment of the port-wine mark is by multiple incision. In the treatment of venous nævus various methods have been employed.—*Medical News.*

[Chromic acid, in strength to meet the demands of the individual case, is every way preferable over all the caustics, in capillary nævus. This form often assumes a fungoid character, with almost uncontrollable hæmorrhage at times—most frequently in connection with scorbutus—when the chromic acid is the sole remedy that affords satisfaction.—Ed.]

Locomotor Ataxia.—Suspension in locomotor ataxia is scarcely ever heard of now, though in the past many observers claimed it relieved the tightening pains, which form one of the most trying symptoms. Nevertheless we believe that through it several persons met their deaths by hanging. Blondel

suggests—and has carried into practice—a method whereby the advantages of suspension can be obtained without any of its dangers. The patient is placed on a bed, with the thighs flexed on the abdomen (knees and chin), and the legs upon the thighs; a cord passed round the neck and under the knees enables him to keep in this position for five minutes. This is repeated every night for eight days, when the pains cease, not to return for some weeks; when the pains do return, the treatment may be resumed. This method seems to bring about all that was claimed for suspension—a slight elongation of the spinal cord; moreover, it is free from danger, and hence worthy of trial.—*Canada Lancet.*

Oleomargarine.—This product has recently been investigated by Jolles and Winkler. The best artificial butter is made from carefully prepared, selected fat, exposed to a temperature of 113° F., to which, when thin and fluid, milk, water and salad oil are added, the whole then being worked together. The entire process, from the veterinary inspection and approval of the carcasses to the choice of the milk, water, and other ingredients, is guarded by the utmost hygienic precaution; consequently such artificial butter is not only equal to good, genuine butter in nutritive value, but greatly superior to the latter in being much less liable to become rancid and in having far fewer bacteria. The bacteria present are only the varieties common to air and water,—although carefully sought for, tubercle bacilli and other disease germs were never found. — *Zeitschrift für Hygiene.*

Intestinal Diseases of Children. — Doctor Phenix emphasizes the necessity of refraining from administering starchy or saccharine foods to young children. Regulation of the hygiene and diet should be strenuously enforced. The mother's milk should always, if possible, be given. If observance of the above rules is not sufficient in ordinary infantile diarrhœa, he suggests remedies to combat fermentation and putrefaction — hydrochloric acid with pepsin, sulphite of soda, and small doses of calomel.—*Canadian Medical Review.*

[Taka-Diastase apparently here offers opportunities impossible with any other remedy. It is at least worth the trial.—Ed.]

Serum Treatment of Diphtheria.—I oppose the antitoxin treatment of diphtheria, first, because in an experience of 154 cases in the Willard Parker Hospital I have failed to see the slightest evidence that it neutralized the toxæmia in a single case—I have never found that it exerted the slightest influence for good in a single manifestation of the disease; second, I oppose it on account of its immediate danger to life through its influence upon the kidneys and on the nervous system, and remotely through its influence on the blood.—Doctor Joseph Winters, in *Medical Record.*

[Doctor Dillon Brown declares he will not employ antitoxin any more, as he has lost faith in its efficacy and can get better results from calomel fumigations.—Ed.]

Deep-seated Eye Diseases.—The very important question of the *sub-conjunctival injections of sublimate* is again discussed in the leading foreign journals, and the general impression is gaining ground that the procedure is of less value than has been claimed for it by its most enthusiastic admirers. Indeed, some ophthalmologists go so far as to say that they can obtain as good results by the sub-conjunctival injection of the ordinary normal salt solution, and that it is not the sublimate which effects the cure, but the irritation of the foreign substance contained in the given solution. Personally we have tried these injections with some noteworthy success in a few cases of keratitis, but in all the rest the results have been totally negative.—*Journal of Medicine and Science.*

Ivy Poisoning.—*Rhus Toxicodendron*, known also as "poison ivy," "poison dogwood," "poison oak," and "poison shoemake" (sumac), when brought in contact with the human skin produces in most instances redness, itching, swelling, and vesication—often erysipelatous in character. Among the numerous remedies which have been employed for relief, the most efficient are: Lead lotion and sweet spirit of nitre; lactated lead lotion (one part subacetate of lead in fifteen parts of milk); powdered ipecac one drachm to the pint of hot water—all applied locally; internally, salines and diuretics.—*Canadian Medical Review.*

Cystoscopy in Incontinence of Urine.—Where there is incontinence of urine in young patients, the endoscope invariably reveals the existence of an inflamed and red zone at the entrance to the bladder, a little above the boundary line between the neck and body of the organ. Immediate improvement or

recovery is obtained from energetic cauterization at this spot with nitrate of silver. Cauterization of the bladder itself is not in the least painful, provided the caustic does not touch the mucous membrane of the urethral canal.—Doctor Kolischer, in *The Lancet.*

Hay Fever.—One or two teaspoonfuls of the following, taken three times daily, either with or after meals, will usually afford relief:

Fowler's solution, 90 minims.
Fluid extract nux vomica, 90 minims.
Fluid ext. cinchona (detannated), 90 minims.
Alcohol, 6 drachms.
Syrup of orange, q. s. to make 4 ounces.

—Doctor Hall, in *Buffalo Medical and Surgical Journal.*

Chloroform Administration.—Sir Benjamin Ward Richardson says the vapor should be properly diluted, and that pushing the same so as to get rapid anæsthesia is the most dangerous plan that could possibly be devised. He believes the mortality following chloroform administration is largely due to rough, ready and venturesome practice.—*Canadian Medical Review.*

Iodine for Tapeworm.—

℞ Iodine, 12 grains.
Potassium iodide, 36 grains.
Water, 1 ounce.

Ten drops in water, three times daily.

This destroys the parasite, and causes its expulsion in a short time.—Doctor Newington, in *Medical Record.*

Treatment of Soft Corns.—Doctor Miall, in the *British Medical Journal,* declares that an ounce of perfectly freshly made tannin dissolved in six drachms of water with the aid of gentle heat, if applied once or twice a day between the toes after washing, gives immediate relief to soft corns. Tannin in powder is not so effectual.—*Medical Record.*

Chloral Hydrate in Hæmoptysis.—Doctor J. Palvy has tried Chloral Hydrate in fifteen cases of hæmoptysis; doses of fifteen to twenty-five grains were injected per rectum. The effect is produced within one-half to three-quarters of an hour. Chloral, moreover, seems to be a valuable prophylactic.—*American Medico-Surgical Bulletin.*

Worthy of Remembrance.—That the pain of spine disease is *in the stomach,* and that of hip disease *in the knee.* No prescription for recurring colic should be written unless it is preceded by a careful questioning of the health of the spinal column.—*New York Medical Times.*

Chloral in Hæmoptysis.—Doctor J. Palvy injects from fifteen to twenty-five grains per rectum. The effect is produced within one-half to three-quarters of an hour. The Chloral is also a valuable prophylactic.—*American Medico-Surgical Bulletin.*

Management of Ring-worm.—This may with certainty be removed by first rubbing briskly with Turpentine until smarting is induced, washing with Carbolic soap (ten-per-cent.), and finally, after drying, applying two or three coats of tincture of Iodine.

Albuminuria.—Retinitis occurring in albuminuria is usually a sign that the kidney disease is far advanced and the prospects of life very bad. Patients seldom live longer than six months after the onset of the disease.—*Columbus Medical Journal.*

Nursing Mothers.—It has been fully demonstrated by experience in maternity hospitals that almost every woman who can bear a child can nourish it, if proper methods be used to secure this result.—*Cleveland Medical Journal.*

Entero-colitis in Children.—Euthymol will be found a valuable adjuvant to the diarrhœa mixtures usually prescribed. It is an excellent internal antiseptic and available in all forms of summer complaint.—*Indian Medical Journal.*

A Point in Chloroform Anæsthesia.—The color of the ear is a good index in chloroforming, and can always be observed.—Doctor Thos. R. Evans, in *Virginia Medical Monthly.*

Abortion of Pneumonia.—This fell malady can almost invariably be aborted if seen during the first twenty-four hours, by giving Pleurisy root—*Asclepias tuberosa.*—*Medical Century.*

Diphtheria.—Doctor Weidner speaks very highly of Loeffler's solution in the treatment of this malady.—*Medical Review.*

Medical Progress.

Chinese Medicine.—The Chinese make no pretense to even the lowest degree of surgical skill; they admit Western superiority freely—that is, for them. There is a Canton phrase to the effect that foreign medicine is well enough for a foreigner, but a Chinaman requires native remedies. The Celestials *have* some rather unexpected idiosyncrasies, such as being sharply purged by the scale compounds of iron, and sniveling miserably from what would ordinarily be a moderate dose of potassium iodide; but what they mean is a difference as wide as quality will cover, and, inferentially, their quality is of the better kind.

They cannot amputate a finger nor open an abscess whose contents are not evident to sight; and, in Canton, though stone in the bladder is most common, the constant sight of intolerable suffering from this cause has failed to nerve a native operator to undertake a radical cure.

Out of about one thousand wounded that were treated at Newchwang last winter, there were two or three cases in which it was claimed that bullets had been cut out by the company officers, and one or two patients said they themselves had removed them, but I do not recall a case in which a native doctor had succeeded, although several presented that showed their feeble attempts. And one of the most cruel pieces of charlatanry ever observed occurred in this connection. These natural doctors, who avail themselves of every peculiarity of dress, equipage, and religion, pour quicksilver (Chinese *water-silver*) into wounds, which they know (or think) contain bullets, expecting it to dissolve the lead. As a part will run out later upon pressure, or upon a change of position, the sufferer can be persuaded that the desired end has been effected. At least one case presented among our patients in which the wound of entrance had been overlooked; then we had to treat a perforated elbow-joint that was extruding globules of mercury about the size of bird-shot, to speak in the most exact language which pathologists affect.

Mr. W. F. Mayers traces the origin of the fire-cracker to an attempt to imitate the sounds made by the burning bamboos and rushes when the marshy districts of Western China were burned over (as they have been since a very early time) to diminish the ravages of malarial fevers. The idea of exorcism is of Indian origin, probably; at any rate, it has descended without abatement in this part of the earth from the sixth century. It is said differently in different places to prevail against small, fierce demons of human shape, and a bird with a nest as big as a five-bushel measure.

From a retrospective point of view, it would appear easy to have invented some effective measures for the avoidance of malaria after the establishment of the single fact that fire in the marshes abated it in a sensible degree—particularly in a period of time of almost geological extension. But I am under the impression that no one has determined exactly the age in the history of mankind in which the wheel was for the first time applied to purposes of transportation, despite the ubiquitous example of the scarabæus (for their regard for which I have never found it in my heart to blame the ancient Egyptians).

The little minor surgical practice into which the general inevitables drive them, is, as far as my observation extends, always deleterious. They use counter-irritation, set up by pinching the skin, scraping with glass, and by scratching it with the dirtiest of finger-nails. Acupuncture is employed, and I have heard of one serious injury therefrom. Their dread of hæmorrhage amounts to agony, and hot resins and corrosive styptic powders are lavishly applied to stop even oozing.

It is curious to reconcile the provisions which they, in common with most savages, make for draining deep wounds, with their impervious dressing for them—a tenacious, black plaster-mass, whose composition I was unable to learn, spread upon tough paper.

I found all the pretentious remedial measures of their doctors based upon some outrageous empiricism that nearly always involved the employment of animal, bird, or reptile, alive or dead, in whole or in part. I was told that their bear's gall was a most grateful emollient for the excoriation that attends tropical dysentery, and I hope it is true. I observed the following case of animal therapeutics, although I have not its originator's rationale: A soldier, whose arm I was chiefly instrumental in amputating at the shoulder-joint for the most extensive and severe phlegmonous inflammation that I have ever seen, ascribed his terrible condition to the application by a Mohammedan doctor of a charred and powdered *rat* to his wound, which was a gunshot fracture of the middle humerus, the bullet remaining among the fragments of the bone. The limb was enormously swollen at the end of two days; but when I suggested amputation and offered him two chances out of ten (so their system of decadal percentage runs), he promptly decamped, only to return for the relief of amputation that is doubly desperate to a Chinaman. Then his arm was

truly elephantine in proportions. "Will it grow out again after you have cut it off?" he asked me; and only a few hours before his death, from delay, shock, and exhaustion, he begged me to bleed him—a request that astonished me no less than my interpreter. I cannot think that this is a common practice with the Chinese, although I am aware that they use it as a means of exorcising devils from the insane, as well as in veterinary practice, in which it seems they cut the vascular parts of the conjunctivæ at the inner canthi with scissors, and secure the stimulating effects of the sharp pain at the same time.

They recognize the vital nature of the blood by employing blood balls—*i.e.*, pith-balls soaked in the blood of criminals executed at execution grounds—as a remedy for consumption, which they call *the old* or *chronic disease*—whose victims in Manchuria are in great part the small-footed women, so my medical acquaintances there considered.

I found some of the priests of La Mission des Etranges, Société de Paris, warm admirers of their hypothetical medical skill; and I had them negotiate for me for some time for a treatment of hydrophobia which they commended, and which I should have been willing both to buy and to undergo, if I had not found it too repulsive; but I was suspected by the doctor, and he would not take me for a patient, notwithstanding my asseverated dog-bite. One of these priests died of hydrophobia in spite of this treatment—for which he had paid fifty francs, I believe. It seems rather a common disease in Manchuria; but the people there show no fear of the dogs, which divide with the hogs whatever scavenger work is done, being an altogether wretched lot of brutes, frequently of formidable appearance. One of my messmates saw one partly paralyzed dying of the convulsions of rabies in a crowded street; and absolutely no notice was taken of its struggles, except when they brought about actual contact with the person. There is a curious superstition connecting the onset of hydrophobia in man with growing hemp, for a knowledge of which I am indebted to D. C. Gray, of the Presbyterian Mission at Liao Yang, Manchuria. He says he has seen several cases, in all of which the origin of the attack was ascribed to having passed a hemp-field after being bitten, and that a dog-bitten Chinaman in that part of the country will undertake any circumambulation rather than pass one. He states further that it is a recognized practice with his rivals, the native practitioners, to fill the wound made by the dog's teeth with lice, which are accredited with the power of devouring the poison of hydrophobia. I am indebted also to the same gentleman for an account of a method of inquiry practiced by the magistrates in Liao Yang to determine whether a man that had died soon after the magisterial punishment of being beaten with a bamboo, owed his death to the punishment, or had swallowed opium with suicidal intent in his rage at the degradation. It was conducted in the same general manner as described in the *New York Medical Record*, April 6th, 1895, with the difference that the skeleton was cleaned by long boiling in an enormous cauldron at one of the city gates, and certain spots found in the marrow of the femora, which were sawn through lengthwise, were held to prove suicide by opium. Their absence would have made the magistrate liable for excessively beating him.

Another striking instance of the utter impracticableness of this so-called practical people came under my immediate notice recently. A passenger-junk was going up one of the streams near Shanghai with a score or so of passengers on board—no one knows how many exactly—when a water-snake, of a kind both numerous and well developed here, was seen on her lee hand. The passengers crowded upon that side to look, and the boat capsized. Several bodies were recovered in a few minutes, one of which was ultimately restored to life. All were laid across the thwarts and bulkheads of other boats in order to get the water out of them; no one present knew of the necessity of getting the air into their lungs, or, at least, of a reasonable way to do it. They were extremely anxious to hang each of them over a cow and exercise her vigorously in the adjacent fields; but there was no dairy convenient, and some objection was forthcoming from the owner of the crops, and the plan was abandoned. I saw the corpses a full day after the accident, merely covered with a piece of matting in a boat alongside the one to which the mishap had occurred; the latter had been righted and drawn up partially on the bank, but there was no one to claim her, as that would have made him liable for damages for the loss of life.

It is my opinion that those in favor of the unrestricted introduction of opium have made out a stronger case in favor of the traffic than has an unquestioned right to be stated, although I am by no means willing to impugn their honesty in the premises. I make this statement with full allowance for its prophylactic action, of which I am convinced, against malaria; for its small tendency to provoke criminal offenses; and for abuses of

it for which the user and not the drug is ultimately responsible. To sustain this position, I shall simply appeal to any physician who has experience in the treatment of any physical ailment of those addicted to its use. I saw it used liberally by the wounded soldiers throughout last winter, many of whom I observed to acquire the habit from its accessibility and from the ready amelioration the pipe afforded their sufferings. It was a weird sight that the long *kangs* (sleeping-platforms heated by burning stalks of sorghum or rushes in the flues under them) presented about the time of my night round of the hospital, with one opium-smoking outfit for, at most, every ten patients, literally in full blast. It is as impossible to forget the sickly sweetish odor of the clouds of steam that a smoker emits, as it was then to blame those unfortunate and half-hearted defenders of their country for their lack of self-denial. Some of these men were as yellow as parchment from its effects. In general it seemed to reduce greatly the capacity of tissues for repair; but one remarkable case recovered from seven wounds that included a fracture of the thigh and gunshot injuries to a wrist and to an elbow-joint, although he smoked a large quantity daily. Even here there was not the same activity of the processes that a normal case would have shown—which may have been to his advantage,—and his injuries were from shrapnel balls, and hence, I think, probably simple.

An application of this drug not hitherto observed by me is resorted to by brothel-keepers to cure the inmates of their places of sulkiness. Acupuncture-needles are smeared with opium and heated, and then thrust deeply into the tissues of the unhappy wretch. As a woman doctor, a missionary out here—whose name I have forgotten—aptly says, this plan is admirably adapted for provoking emotions of some kind. An inquiry is now in progress in this city concerning the death of a girl upon whom this atrocity had been inflicted.

The saddest sights to be seen in all this awful country are afforded by the insane, who are habitually abused. This empire has been and will be for many ages, if one may predict the future from the past, the settled home of demonology, upon whose easy assumptions these aberrations of consciousness are explained with no doubts to torment the explainers.

The comparative infrequency of hernia among the laboring class seems to offer an opportunity to learn something of how to decrease its prevalence with us. It is universally characterized by the Chinese laity as an affection of the weak. Do strength and good health forbid its incurrence in America and England?—Doctor W. F. Arnold, U. S. Navy, in *Southern Practitioner*.

Statistical Report on Hydrophobia.—Males, ten; females, five. The ages ranged from three years to eighty-three. The animals to which the disorder was ascribed were: In thirteen cases, dogs; in two cases, cats. The incubations varied from three weeks to six months. Four of the deaths followed bites of dogs unsuspected of having rabies. Of the fifteen cases, one was unmistakably due to drink and uræmia; one was considered hysteria at Bellevue Hospital, and died soon afterward under the care of the New York Pasteur Institute; three were plain lyssophobia (one dying in the New York Pasteur Institute), and one "mewing like a cat" (a cat-bite case). The pernicious use of strong narcotics is notable in the treatment of many of the fifteen cases I have collected, and the apparent uselessness of cauterizations with silver nitrate.

I have made a study of my records for five years of what I have labeled "mad-dog scares." The result indicates that in fifty-five instances of alarms about mad dogs, with a record of one hundred and seventy-five persons, of all ages, bitten, I have found only three deaths from so-called "hydrophobia." This, if correct, would indicate that the natural mortality from the bites of rabid dogs is 1.58, or less than two per cent. The vast majority of the deaths attributed to hydrophobia have followed bites by unsuspected dogs, and very few have followed bites by dogs that ran amuck and that excited alarm at the time. It is a curious fact, taken in connection with this one, that a very large number of the deaths from so-called hydrophobia followed the bites of dogs that had no history or appearance of any disease.

The number of cases for the past year is about what I have before reported for other years; the total probably does not include all that have occurred in the United States; but I think it represents the actual figures as accurately as the statistics attainable in other countries, without government assistance. Against this number of actual deaths we may set the absurd claims put out by Pasteur Institutes of so-called "cures." Last year the Institute in Paris treated 1194, all supposed to be liable to die of hydrophobia, and these figures will probably be used to support the assertion, copied into books all over the

world, that Pasteur has reduced the mortality from hydrophobia to less than one per cent. of those bitten by rabid animals. It is astonishing and disheartening to find men occupying responsible professorial positions who fail to see the utter fallacy of such claims or to appreciate the wrong they do by accepting and approving them.—Doctor Chas. W. Dulles, in *Medical News*.

Defects in Surgical Practice.—The lack of dexterity and accuracy, which leads to slow and consequently imperfect operating, is the most noticeable; every moment wasted in an operation is a detriment to the patient as well as to the surgeon. Rapidity of operating is especially necessary in order to avoid prolonged anæsthesia, which is injurious and tends to retard recovery by favoring non-union, suppuration, and sepsis. Time is also precious, because the longer the tissues are exposed and the more they are handled, the more slowly and imperfectly they heal. Tissues exposed to the air for an hour or more begin preparation for healing by granulation, and are therefore less capable of uniting by immediate union. Since the introduction of antiseptic surgery, imperfections are apt to arise from the endless detail necessary, which in itself makes it difficult to attain perfection. Another source of defect is the disposition on the part of some to devise new operations and to modify (in the hope of improving) old ones, while they are in black darkness regarding how to perform many of the operations that are known to be quite efficient and well established by the surgeons of the past and present. The endeavor to cover too much ground is also a mistake; for if one endeavors to wrestle with the whole field of operative surgery, he finds such a number and variety of operations to do that one life is not enough for him to perfect himself in them all.—Doctor Alexander Skene, in *Brooklyn Medical Journal*.

Dermoid Cyst of Anterior Mediastinum.—This occurred in a soldier, aged twenty-two, the symptoms being prominence of right chest, difficulty of respiration, and severe coughing terminating in efforts at vomiting. Auscultation gave negative results. During three years the chest was aspirated on several occasions, some forty ounces of a yellowish non-purulent fluid being removed. Finally the patient returned to the hospital, when in the neighborhood of two inches of the fourth rib was excised and the aspirator needle introduced into a sac (which could not be determined as either extra- or intra-pleural) of a capacity of about fifty-six ounces; from the fluctuating portion of this a thick, turbid, greenish fluid was withdrawn, devoid of both pus and blood but mixed with particles resembling grains of rice colored with saffron. Irrigation brought away nothing but hair, skin, and sebaceous matter. As the sac was adherent on all sides, it was determined to obliterate its cavity by exciting inflammation, for which purpose tincture of Iodine was employed and Iodoform gauze introduced. Four months later the patient was apparently in perfect health, a small retro-costo-sternal fistula remaining. Twenty-three similar cases are to be found in literature.—Doctor Dardignac, in *Revue de Chirurgie*.

Effect of Removal of Ovaries upon Sexual Appetite.—Miss X——, 25 years of age, who had her ovaries and tubes removed about seven years ago on account of pain and enlargement, consulted me for a discharge, which proved to be gonorrhœa. She told me her menstruation had gradually left her, until the end of the year, when it disappeared entirely, so that she had had no periods during the last six years. Recently, here in Montreal, she met a former male acquaintance and had intercourse with him, and during this act became very excited, having an orgasm, and straining herself, which she thought was the cause of her discharge. On further inquiry she assured me she never had experienced so much sexual pleasure as she did now, and in her opinion the removal of the ovaries in no way lessens the feelings of a woman toward the opposite sex. This, of course, is not the general belief, and I therefore think it well to report this case as one among many others in which the removal of the ovaries has not been followed by loss of sexual desire, but, on the contrary, by a marked increase of it.—Doctor A. Lapthorn Smith, in the *Medical Record*.

Effect of Ovariotomy upon the Voice.—The effect of castration in young males in heightening the pitch of the voice led Doctor Moure to investigate the results accruing from ovariotomy. In two young women the voice became deeper, harsher, and hoarser, the higher notes were lost, and the voice fell from soprano to mezzo-soprano. These observations are obviously insufficient to establish a theory, and, as no previous cases are on record, further confirmation is needed.—*Boston Medical and Surgical Journal*.

The Medical Age.

VOL. XIII. DETROIT, SEPTEMBER 25th, 1895. No. 18.

Original Articles.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.*

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S. ARMY.

(*Continued from page 519.*)

III. THE ARMY OF SWITZERLAND.†

The Federal Council, the highest military authority, controls the War Department, which for convenience of administration is subdivided into bureaus. The head of one of these, the Medical Department, is the Chief Medical Officer, a colonel, who directs the entire sanitary service of the army in time of peace, including the recruitment, instruction and discipline of the sanitary (H. C.) corps, and the control of all the material of his department. In his office are: an assistant ("chef de bureau"), a secretary, a clerk, and a staff apothecary officer (major) who assists in matters connected with medical supplies; and in time of war a chief of the hospital service, a chief of the voluntary sanitary service, and an apothecary officer are added.

There is also, in active service, a Principal Medical Officer who is the immediate head of the sanitary service in the field, eight field hospitals ("Élite"), sixteen ambulance hospitals ("Landwehr"), five transport columns, three sanitary railway trains ("Landwehr"); and eight hospital sections ("Landwehr") may also be mobilized. The various arms of the service take precedence among themselves in the following order: Infantry, Cavalry, Artillery, Engineers, Sanitary Troops, and Administration Troops. All officers of the various departments, except chaplains, hold actual military rank and are addressed by their military titles. The rank of medical officers ranges from first lieutenant to colonel, that of apothecary officers from lieutenant to major.

In the establishment of a Field Hospital there is one medical officer (major) commanding; also, one administrative medical officer (captain or lieutenant), one apothecary officer (captain or lieutenant), one chaplain and sometimes two, one clerk (lance-corporal), and one attendant (non-commissioned officer). Attached from Second Division "Landwehr" Train Battalion are: One captain, one lieutenant, one veterinary officer, one sergeant-major, one quartermaster-sergeant, nine lance-corporals, two trumpeters, one wheelwright, two collar-makers, two farriers; twelve requisitioned carriages for wounded (twenty-four draught horses), two requisitioned carriages for provisions (four draught horses), two requisitioned carriages for baggage (four draught horses), two material wagons ("fourgons") with eight draught horses, thirty-five men, seven saddle horses, and fifty-six draught horses (of which sixteen are spare).

The Hospital Ambulance Establishment consists of one chief with rank of captain, at least three other medical officers (captains or first lieutenants), one quartermaster (first lieutenant or lieutenant), two hospital attendants (non-commissioned officers), one apothecary officer (first lieutenant or lieutenant), ten hospital attendants (lance-corporals), two or four bearers (non-commissioned officers), twenty or twenty-four

*Read before the Association of Military Surgeons.

†Information upon the subject of this paper has been sought from convenient sources, and the compiler has equally freely used the substance and the words of the various original reports, etc., from which he has gleaned. He is particularly indebted to the Military Information Division of the Adjutant-General's Office, U. S. A., for valuable assistance.

bearers, one "fourgon" (material wagon—four draught horses), one ambulance wagon for wounded (two draught horses), one provision wagon (two draught horses), and one baggage wagon with two draught horses. Mountain ambulances may be formed, as required, from the *personnel* of the regular ambulances, and equipped from the field hospitals. The equipment of two mountain ambulances is permanently kept up for the Eighth Army Division.

To the sanitary troops of the "Landwehr" is assigned the duty of organizing any necessary number of ambulances; there are at present sixteen in this branch of the national forces. It is intended the transportation (wheeled) for these ambulances will be requisitioned. The sanitary *personnel* not thus employed will be distributed among the hospitals and transport columns, etc., mentioned below.

The field hospitals are numbered 1 to 8, according to the divisions to which they belong. The ambulances of the "Élite" are numbered 1 to 40; numbers 1 to 5 belonging to the first field hospital, and so on. Those of the "Landwehr" are numbered 1, 2; 6, 7; 11, 12; 16, 17; 21, 22; 26, 27; 31, 32; 36, 37; numbers 1 and 2 belonging to the first divisional district, 6 and 7 to the second, 11 and 12 to the third, and so on.

For the transport and care of the sick and wounded sent from the front during military operations, the following sanitary reserves will be furnished by the "Landwehr" of the whole army: Five transport columns, three sanitary railway trains, and eight hospital sections. The transport columns are intended to coöperate with the railways and steamboats for conveying the sick and wounded from the field hospitals to permanent institutions.

The establishment of a Transport Column of the Sanitary Reserve consists of one principal medical officer (captain), one medical officer (captain or first lieutenant), ten hospital attendants, two non-commissioned officers, thirty-two requisitioned carriages (sixty-four draught horses)—thirty of which vehicles are for the sick, the other two being reserved for baggage and provender. These transport columns are numbered 1 to 5; and the sanitary trains, as far as possible, will be supplemented by ordinary railway trains in the conveyance of sick and wounded to the permanent hospitals.

Each Sanitary Train demands one principal medical officer (captain), one medical officer (captain or first lieutenant), one apothecary, two hospital attendants (non-commissioned officers), five hospital attendants, ten bearers, and fifteen railway carriages. The special material for furnishing three such trains is to be kept in store in the Federal magazines; that required for two trains already exists. After providing the ambulance and sanitary trains, the remainder of the *personnel* of the "Landwehr" sanitary troops — and, if necessary, other supernumeraries — will form eight hospital sections, each capable of manning a military hospital of 200 beds. The establishment of these sections has not yet been definitely determined, but will probably be as follows: One principal medical officer, two or three assistant medical officers, one apothecary officer, ten to twenty hospital attendants. In 1891 a corps organization for the Swiss Army was definitely adopted, and each army corps has attached to its staff a chief medical officer and a corps field hospital.—In the Second Corps, this hospital consists of four ambulances. Each division has one divisional medical officer (lieutenant-colonel), one adjutant of divisional medical officer, one staff clerk, and one hospital attendant. In the total staff there are thirty-eight officers of field hospitals (including "Landwehr" train), twenty-eight non-commissioned officers, 232 lance-corporals and other enlisted men, twenty saddle horses, 106 draught ditto, and thirty-eight carriages.

Among the number of officers and staff clerks at the immediate disposal of the Federal Council at the present time are two medical officers, nine lieutenant-colonels, nine majors, and one apothecary officer (major), all of the Sanitary Troops. Of the supernumerary troops placed at the direct disposal of the General Commanding the Army (in time of war) are: Five transport columns of the sanitary reserve, three sanitary trains (railway), and six hospital sections.

In the establishment of the Staff of Army Headquarters, Duty Section, are one medical officer and two hospital attendants.

The Medical Division of the Staff of the

Army consists of one principal medical officer, two medical officers (adjutants—one of whom acts as medical officer of Headquarters Staff), and one staff clerk.

The normal and actual strength of the Sanitary Service ("Élite") is 4500 sanitary troops normal establishment, and 4950 actual strength. The "Landwehr" at present contains 2954 sanitary troops normal establishment, and 1555 actual strength.—In the total of the sanitary troops of the "Élite" is included the second divisions of the "Landwehr" train battalions which are required to horse the field hospitals.

*Sanitary Troops Recruit School.**—The session of the Medical Section of the Recruit School lasts forty-six days, during the first eleven of which the necessary military instruction is given to a school of infantry recruits, who thereupon undergo a technical course of thirty-five days. Non-commissioned officers attend a "cadre" school during the last twenty-one days of this period. At the conclusion of the course, candidates for the grade of hospital attendant are selected from the litter-bearers, and put through a further course of twenty-one days (termed a "Cours d'Hôpital") in Cantonals hospitals. In 1886, 400 recruits passed through the recruit schools, of whom 161 subsequently attended the hospital course, and all but four became hospital attendants. In 1887, 434 recruits passed through the school. There is likewise a repetition course which all military medical officers must, during their term of service, attend for a period of fourteen days—this is termed a "Cours d'Opération," and two courses are held each year, about twenty medical officers of the rank of captain attending each. The instruction is partly medical and surgical and partly military. In addition there is a special course for superior medical officers; this was found necessary in consequence of great changes in duties prescribed by the new medical regulations. The instruction includes a series of practical problems to be discussed and worked out, both in the lecture-room and in the field, the exercises being directed by an officer of the General Staff. It is proposed to extend the instructions to all medical officers of the rank of captain who are nominated for promotion.

With regard to the *personnel* of the Sanitary Service, twelve out of forty ambulances are usually exercised each year (and according to the scheme at present in force, five ambulances of each of the eight field hospitals are called out for three repetition courses in ten years): two ambulances during the year at battalion exercises, four during brigade, two during regimental, and four during divisional maneuvres.

Of the sanitary *personnel* of the troops (infantry, cavalry, etc., as distinguished from the field hospitals), the senior medical officers of the battalions and four hospital attendants only in the infantry, and all the sanitary *personnel* of the special arms, perform their repetition courses with their corps. The rest of the infantry medical staff (second medical officer, non-commissioned officers, and bearers) undergo their course with the ambulances. For the divisional and brigade maneuvres, a detachment of sanitary troops is always to be called out and instructed under an officer of the Sanitary Staff.

The Officers' Preparatory School—Medical Section—is located at Basle, and two courses, each lasting thirty-two days, are given. After passing through the school, forty or fifty medical men and four to eight apothecaries are annually commissioned as sanitary officers. Only physicians and apothecaries of suitable scientific acquirements who have passed through a recruit school can be nominated to join officers' preparatory schools with a view of obtaining commissions in the Sanitary Troops. The conditions to be fulfilled for the first appointment and promotion of officers are: For apothecary officer with the rank of lieutenant, a certificate of capacity: For medical officer with the rank of first lieutenant, a certificate from an officers' preparatory school; with the rank of captain, service as first lieutenant for two years and certificate of capacity; with the rank of major, service as captain for two years and selection; with the rank of lieutenant-colonel, service as major for two years and selection; with the rank of colonel, selection among the lieutenant-colonels. Certificates of capacity for first appointments as officers are given at the termination of the session of the officers'

*From "The Armed Strength of Switzerland, 1889."

preparatory school, and are signed by the commandant of the school, according to the vote of the majority of the instructors, and countersigned by the "Chef d'Armée." In these, besides qualification in the various branches of professional knowledge, acquaintance with national and foreign languages is noted. Certificates of capacity for promotion are given by the Chief Instructors, who form their opinion from the reports made on the candidates during the courses of instruction, consideration being given to the right of nomination which is vested by law in the immediate commanding officers of the persons concerned. Commanding officers submit their nominations through their immediate superiors, and these in forwarding to the Chief Instructor also express their opinions on the proposed officers. The certificates are submitted to the "Chef d'Armée" (and divisional commanders in the case of infantry) for their counter-signature, and finally transmitted to the Military Department. The Chief Instructors, if they deem it necessary, are empowered to examine officers proposed for promotion before issuing certificates of capacity. Officers who have been relieved from service on account of age may be re-employed if they wish it and the authorities think fit. Mounted officers are entitled to a civilian servant or allowance in lieu thereof, during active service and also during instructional courses; the daily allowance for a civilian servant being sixty-five cents, or fifty cents if rations or quarters are found. Civilian servants who are sick or injured in service are entitled to free rations, quarters, and medical treatment, and to ten cents daily pay, and all civilian servants are subject to military law. Men sick in hospital are subsisted by the hospital authorities, and for the subsistence and treatment of officers sent to hospital during instructional service a daily allowance of fifty cents is authorized. During active service, however, the Confederation pays for the subsistence and medical treatment of all sick officers.

Mere length of service confers no claim to pension in the Swiss Army. Every three years the Federal Council (which is the supreme authority in all matters relating to pensions) nominates a commission which sits under the direction of the Military Department, and investigates all claims on behalf of the Council. This "Pensions-Kommission" consists (1889) of the chief medical officer, a brigadier-colonel, a lieutenant-colonel of infantry, and a medical officer.

The Communes provide not only all the requisitioned carriages laid down in the regulations, for which they receive an indemnity, but must also comply without delay with all requisitions for transport for military purposes. Under the latter head are included: Provisions and baggage wagons for corps; wagons for the sick required by the field hospitals and transport columns of the sanitary reserve; harness and wagon-covers for the foregoing if these cannot be furnished from corps material; wagons, horses and drivers for provision columns, lines of communication, and carriage parks; the same for transports of detachments and single soldiers, sick, baggage, etc., for which army transport is not provided; horses for assisting transport to ascend steep hills; pack animals; carriers; guides; workmen to clear and repair roads, etc.; and transport boats.

The Chief Medical Officer of the Sanitary Service, who is the permanent official at the head of this branch, has the following duties in time of peace: Responsibility for the recruiting and instruction of the sanitary troops and for the preparation of regulations regarding the medical service: Nomination of medical officers for appointments, promotion, and retirement: Distribution of the sanitary *personnel* of all ranks to the various units, with the approval of the Military Department: The superior direction of the commissions appointed to conduct the medical examination of recruits for all arms: Responsibility for sanitary material of every description — he must see that the clothing and equipment of the sanitary troops are complete and fit for immediate use. He organizes the medical service for all assemblies of troops, whether for instructional purposes or for active service, indicating the hospitals and dispensaries which are placed at their disposal; makes such proposals and arrangements as he thinks necessary for insuring the health of the troops, including questions of provisioning, clothing and housing the men; exercises general supervision over voluntary aid associations. Likewise he reports on all

claims for pension or indemnity, and is *ex-officio* a member of the Pension Commission; checks and countersigns all accounts connected with the medical service; and prepares the yearly estimate for the medical service. On mobilization for active service, the medical peace establishment of an assistant, a secretary and a clerk is augmented by a deputy (a senior medical officer), a chief of the hospital service, a chief of the voluntary aid service, and a staff apothecary. The Chief Medical Officer is then charged with making all arrangements for putting the medical service on a war footing, the augmentation of *personnel* and material, establishment of military hospitals, arrangements for the transport of sick from the initial stations of the lines of communication rearwards, the instruction of newly raised levies, organization of voluntary aid, and supervision of the entire territorial sanitary service and its coördination with that of the troops in the field.

The Chief of the Hospital Service superintends the organization and administration of the permanent hospitals, and keeps the chief medical officer of the lines of communication informed of the available accommodation in the hospitals.

The Chief of the Voluntary Aid Service superintends the general working of volunteer ambulance associations, and maintains constant communication with the principal medical officer of the army in the field, with the object of insuring the useful employment of the *personnel* and material placed at the disposal of the State by voluntary associations.

The Staff Apothecary, in peace and war, superintends the provision, and is responsible for the quality, of all drugs supplied to the army.

The directing medical officers of the field army are: the Principal Medical Officer; the Corps, the Divisional and Infantry Brigade Senior Medical Officers, who are under the orders of the military commanders to whose staffs they are attached, and responsible to them, as well as to their own medical superiors, for the conduct of the whole medical service of troops under their supervision. The commanding officers are required to give them such information as to proposed movements of troops—and especially as to dispositions for impending engagements—as will enable them to make suitable arrangements for the dressing-stations, etc., and a directing medical officer must in all cases submit his proposals for the general organization of the medical service in the field for the approval of the commanding officer, or his chief of staff, before issuing orders on the subject.

The Principal Medical Officer with the troops keeps the Chief Medical Officer constantly informed of all important occurrences in the field which require to be known at the home medical headquarters, is responsible for the coördination of the field service with that of the lines of communication, for the timely demand for medical supplies and reinforcement of *personnel*, and generally for the working of the entire medical service of the army in the field.

The Chief Medical Officer on the lines of communication is under the orders of the Principal Medical Officer of the Army, and is responsible for the arrangements for the transport of sick and wounded from the field to the permanent hospitals, and to this end has under his orders the transport columns, sanitary trains and transport corps attached to them, and the lines-of-communication hospitals and medical service generally; he is further responsible for the mobilization of the requisite number of transport columns at the terminal stations, and for their being in immediate communication with the ambulances and provisional hospitals in the field, and generally for the establishment and distribution of the requisite sanitary trains and lines-of-communication hospitals at suitable stations. He reports all return transport of sick to the Chief of the Hospital Service.

The Divisional Medical Officers are responsible at all times for the entire medical service of their divisions. In time of peace (and when no principal medical officer of the army is appointed) they are under the orders of the Chief Medical Officer in all matters of sanitary service; when in active service, under those of the Principal Medical Officer of the Army; the field-hospital and all other sanitary troops of the division are under their orders. In time of peace the Divisional Medical Officer is president of

the medical commission for recruiting, keeps the rolls of the entire medical *personnel* of the division, is responsible for keeping the Chief Medical Officer informed of all changes in the establishment of the medical officers and other sanitary *personnel* of the various corps, and for the appointment, promotion and retirement of the non-commissioned officers; he also inspects the field hospitals at repetition courses, and proposes the hygienic measures necessary for maintaining the health of the troops. On the field of battle he fixes the principal dressing and ambulance stations according to the general indications of the Chief of Staff, and takes the requisite steps for evacuation of the wounded.

For every permanent place of assembly of detachments of troops, and every permanent Federal barrack station, the Surgeon-in-Chief nominates a Station Surgeon ("Medicine de Place"), who is chosen from among the resident medical officers serving or retired from service; as a rule the engagement is for one year. When any body of troops assembles at his station without its medical officers, the Station Surgeon performs the duties of the latter, and also assists, with advice and otherwise, those medical officers who may be called upon for duty with the troops. If there is a military hospital at the station, he is *ex-officio* surgeon thereto, and he is responsible for the sanitation of the barracks and the health of the troops quartered in them. For every day of service he receives $1.35 pay, with sixty cents extra for each day on which he acts as surgeon to a military hospital. If he accompanies the troops during exercise in field service, he receives the pay of his rank, and horse allowance.

The routine duties of the medical service are: With the troops; in field hospitals; in permanent hospitals; and when the sick are treated by private physicians.

The Medical Staffs of the various units have heretofore been enumerated. The *personnel* attached to the line consists of medical officers, bearers, and hospital attendants whose duty is to give first aid to the sick and wounded. During peace, and when in cantonment, mild cases of illness which are not likely to last more than a few days are treated in corps infirmaries, but more severe cases are removed to civil hospitals.

There are military hospitals in several of the large barrack towns, as Bern, Thun, Lucerne, etc., but these are ordinarily open only during the training sessions. At stations where such do not exist, a soldier during training is treated in civil hospitals, and—if his illness is not traceable to his own neglect or misconduct—at the expense of the Confederation.

The Swiss Field Hospital may be looked upon as a medical battalion consisting of a staff and five companies, the latter being termed "ambulances." The staff has sixteen requisitioned wagons, of which twelve are fitted up for the wounded (and attached as required to one or other of the ambulances), two for provisions, and two for baggage and cooking, and a column of reserve material, consisting of two wagons of medical stores, and sixteen spare horses. Each ambulance, which is really a movable field hospital, has four wagons, including one for the wounded. In time of war all these are horsed and driven by the second division of the "Landwehr" train battalion of the Division; in time of peace, by supernumerary men of the two divisions of the "Elite" train battalion, or any train soldiers available. Further, material for two mountain ambulances (arranged for pack animals) is at the disposal of the Eighth Army Division, and each field hospital is capable of forming two small mountain ambulances. The ambulances can be used to form sick depots—*i. e.*, corps infirmaries for several units,—as collecting-stations during marches, as principal dressing-stations during engagements, and as evacuating-stations at the terminal stations of the lines of communication. The removal of the sick and wounded from regiments and dressing-stations of the first line to the principal dressing-stations may be effected by the ambulance wagons (one per ambulance) and the carriage column of the field hospital (twelve wagons attached to the ambulances); but whenever possible, as during peace service, the troops themselves remove their sick to the ambulances in their own transport. If "Landwehr" troops should be attached to a division, an ambulance will be added to the "Elite" field hospital thereof.—These arrangements complete what are known as the first and second lines of medical assistance,

which are concerned with the treatment and evacuation of the wounded on the field of battle, and are under the orders of the Divisional or Principal Medical Officer of the Army. In rear of these again is organized a third line consisting of permanent hospitals, which are placed at the limit of the field of operations or on the lines of communication.

As a rule, sick and wounded who cannot be treated with their regiment or in the field hospitals (*i.e.*, ambulances) will, in time of peace, be removed to the civil hospitals engaged by special contract. If these do not suffice in time of war, permanent hospitals are established (classified as principal and reserve hospitals, special hospitals for infectious diseases, and convalescent stations), which are under the immediate orders of the Chief of the Hospital Service before mentioned, and manned by the hospital sections, assisted by voluntary aid associations. Material for 5000 beds complete is always kept up for these establishments in the depots at Bern and Lucerne. The transport of sick from the field establishments to the permanent hospitals is effected by the five transport columns furnished by the "Landwehr," ordinary railway trains, sanitary trains, steam vessels, and the medical service of the lines of communication.

With regard to the private medical attendance of sick and wounded, special permission of the Chief Medical Officer is required, and men so treated, as a rule, waive all claims to indemnity, etc.

The actual working of the Sanitary Service on the field of battle is as follows: In the case of a single regiment of infantry, say 2332 all ranks, each company during the advance is accompanied by its bearers, in the firing line. The medical portion of the staff of each battalion (consisting of two medical officers, two non-commissioned officers, two hospital attendants, and twelve bearers) remains in the rear and joins that of the other two battalions to form a regimental sanitary column, which thus becomes an independent unit, under the orders of the senior medical officer, who posts his detachment, now fifty-four strong (including the five other medical officers) in rear of the regiment, and follows it according to the direction of the Regimental Commander. The corps sanitary material in the battalion "fourgon," consisting of eight stretchers per battalion, and the medical knapsacks and dressing-bags, are taken out and carried by the bearers in turn. As soon as the regiment becomes seriously engaged, the Regimental Medical Officer organizes his column as follows: Bearers are sent to the front in squads under the non-commissioned officers, forming patrols to search for, and relays to bring in, the wounded; and the first line dressing-station is established at a place selected or approved by the Regimental Commander, say 900 to 1100 yards in rear of the principal line of combat, or nearer if there is cover. If possible the troops will be informed of the position of this station, and it will be marked by waving flags or fixing red lanterns.

The non-commissioned officers in charge of the searching squads carry small horns for the purpose of signaling to their men. The detachment is then divided into groups: First, for the reception and sorting of the wounded (when a tag showing the nature of the casualty is affixed to the wounded man, after which he is carried to one of the following groups): Second, operating group, by which urgently required operations are executed: Third, group for treatment of wounded and those who have been operated upon, preparing them for removal to the ambulances, bandaging, applying splints, etc.: Fourth, group for the slightly wounded, who will be treated at leisure: Fifth, group for receiving the dead and dying, with which is the Regimental Chaplain.—It may be mentioned here that the antiseptic bandages provided for use in the field are carried by the medical officers and bearers in parchment paper envelopes. It was at one time intended to provide each man with a bandage, as in the German Army, but experiments in the field showed that these, if constantly carried on the person, soon deteriorated from dust and moisture, and were frequently put to other uses; detached parties, however, are to be supplied with packets when away from medical assistance.

Each of the five ambulances of a field hospital forms a complete mobile hospital, capable of independent action in any position. The "fourgon" of each ambulance contains the necessary outfit for this purpose, with

drugs and appliances sufficient for forty patients for two months, or for the treatment of 200 wounded after a battle; it also carries bedding for forty or fifty patients. The wagon for wounded carries twelve men sitting or six lying down. Further, the staff of the field hospital has in its two reserve "fourgons" sufficient bedding for eighty to one hundred men, with a store of drugs and hospital utensils, besides the sixteen requisitioned wagons before mentioned. Generally, one ambulance is employed to form the principal dressing-station for each brigade, the others being utilized in one of the various ways before indicated, or kept in reserve to reinforce one or other of the two already in action. The ambulance for each brigade is established during an engagement two kilometers from the firing line, or one kilometer in rear of the centre of the first line of medical assistance. The approximate position will be indicated by the commanding officer (brigade or divisional) after the directing medical officer has offered his opinion.

For the transmission of orders to the Chief of the Field Hospital or the chiefs of ambulances, the commanding medical officer is provided with mounted orderlies (guides or train non-commissioned officers). As soon as the ambulance is established, the senior medical officer sends his wagons for the wounded to the dressing-stations of the first line, so as to be ready to bring in those who may have already been received there, and divides his detachment into groups according to the facilities offered by the buildings or locality he has occupied. Usually these groups comprise: a receiving party, which will examine and classify the cases, passing them on to the other groups, and making out the admittance returns; a subsistence section, under the quartermaster, which undertakes all the duties connected with the messing of the establishment; a surgical section, which may further be divided into sub-sections for operations, setting of fractures, and simple dressing; a hospital section, dealing with the quarters and bedding of the wounded. The wounded and those operated upon who cannot be moved with safety will be provided for in this section, transportable cases requiring continued treatment being moved as soon as possible to the third line. If the establishment of the ambulance is not sufficient, it may be reinforced by one of the ambulances kept in reserve, by order of the divisional medical officer.

If the forces engaged continue to advance, the ambulance must necessarily remain stationary for some time, and one of the unemployed ambulances must follow up the troops, and similarly in case of retreat.

The chief medical officer of the lines of communication, as soon as possible, despatches sections of the "Landwehr" transport columns, to insure the evacuation of the ambulances, and to organize the transport of convoys of wounded to the nearest "terminal stations;" or sanitary trains, etc., may be employed to remove the wounded towards the permanent hospitals. If, however, owing to the large number of untransportable sick, an ambulance cannot be evacuated for some time, it may form itself into a provisional field hospital; and the equipment has been carefully arranged with a view to this contingency.

The regulations regarding voluntary aid in time of war provide that such assistance may take the form of personal help in nursing, outside the immediate sphere of military operations, and in the transport of the sick and wounded, and also that of gifts of medical comforts, etc.; but all such assistance must be organized under a responsible direction *and placed in all respects under the supreme military control.*

In addition to the medical officers serving with the troops, the Confederation has at its disposal in time of war the services of all medical men who are within the limit of age prescribed for the "Landsturm." It is specially provided that on a general mobilization, consulting surgeons may be nominated by the Chief Medical Officer and called in to serve by the Military Department, which will fix the rate of pay to be granted them. They must be men of superior professional standing and may be placed at the disposal of the Principal Medical Officer of the Army, or employed in permanent hospitals.

In 1880 a "Société Militaire Sanitaire" was formed in Bern by the members of the Sanitary troops, its object being to promote improvement in the theory and practice of

military sanitary art by means of lectures, etc. In the following year societies were established in several other towns and a central committee was formed. Besides the mutual improvement of members, these societies charged themselves with the formation of "Sociétés Suisse de la Croix Rouge," having as their object the providing of voluntary aid for time of war, by educating the civil population in the art of giving first aid to the wounded. In 1882 a "Société Centrale de la Croix Rouge" was formed, its aim being to organize the *personnel* and material of the voluntary aid movement. In 1883 the central committee of the society, with which most of the local military societies had affiliated as sections, was removed from Bern to Basle; and in 1885, the Military Department, recognizing the value of these organizations as a means of extending the knowledge of the members of the Sanitary troops of whom they were composed, commenced granting a small annual subsidy to the sections which had joined the central society. In 1886, on the initiative of the military sanitary societies, several "Sociétés de Samaritains" were formed and instructed, after the model of the ambulance societies in England and Germany, their object being to enable their members (policemen, railway employés, and private individuals) to give "first help" in case of accidents of all kinds. In 1887 there were thirteen of these military sections, with 274 members, affiliated with the central society, and most of the "Samaritain" societies had amalgamated as societies of a central association, the Military Department granting them also a small subsidy. In case of war it is foreseen that the latter societies could be utilized with great advantage, in rear of the army, to accompany convoys of sick on the road between detraining stations and the hospitals.

Recapitulation. — The Sanitary Organizations are composed of the sanitary *personnel* and the attached *personnel.** The former consists of the sanitary officers, military medical officers, military apothecary officers, sanitary non-commissioned officers and soldiers, non-commissioned officers, "infirmiers," "brancardiers" (litter-bearers); the latter of the necessary quartermasters furnished by the Administration troops, the chaplains, the second division of the train battalion of the "Landwehr" of the corresponding division as hospital train, the necessary "cadres" for the transport columns, and the *personnel* of the volunteer aid societies.

In the distribution of the medical *personnel* there are attached to the Chief Medical Officer in case of general mobilization, one sanitary officer and his lieutenant (a lieutenant-colonel), one chief of the hospital service, a chief of the voluntary aid service, and one staff apothecary (a major): To the Staff of the Army—One medical director of the army (a colonel), two adjutants (majors or captains), one staff secretary, two "infirmiers:" To the Commander-in-Chief of the lines of communication—One surgeon-in-chief of the lines of communication (lieutenant-colonel or major), one adjutant (captain or first lieutenant), one secretary.

The Staff of the Army Corps is composed of one chief corps medical officer, whose staff will doubtless be about the same as that of the division medical officer.

The Staff of a Division has one division medical officer (lieutenant-colonel), one adjutant (captain or first lieutenant), one staff secretary, one "infirmier."

The Staff of an Infantry Brigade: One brigade medical officer (major).

The Staff of an Infantry Regiment: One captain (selected for the duty from the battalion medical officers of the regiment).

To each Battalion of Fusiliers or Carabiniers are attached one to two medical officers (captains or first lieutenants), two non-commissioned officers, six "infirmiers" (of whom the battalion medical officer will attach one to each company), and twelve bearers.

The Staff of a Regiment of Cavalry: One medical officer (captain or first lieutenant), and to each squadron one "infirmier."

A Brigade of Artillery: One captain (designated for the duty from the battery medical officers).

A Regiment of Artillery or a Divisional Park has one to two medical officers (captains or first lieutenants), who are selected from battery or park column medical officers.

Each Field Battery or Park Column has

*Data furnished by the Information Division A. G. O. U. S. Army.

one medical officer (captain or first lieutenant), one "infirmier," and two bearers.

A Mountain Battery and a Company of Position, each one medical officer (captain or first lieutenant), one "infirmier," and two bearers.

A Train Battalion has one medical officer (captain or first lieutenant) to each division in the "Landwehr"—after the departure of the divisions of the train battalion for the engineer battalion, and for the Administration company, the medical officer of the train battalion enters the staff of the field hospital as adjutant; one "infirmier."

The Staff of an Engineer Battalion requires one to two medical officers (captains or first lieutenants); each company, one "infirmier" and two bearers; an Administration company, one medical officer (captain or first lieutenant), and to a subsistence section one "infirmier."

The Staff of a Field Hospital is composed of one chief of field hospital (a medical officer ranking as major), as adjutant the medical officer of the train battalion, one officer of administration (captain or first lieutenant), one apothecary officer (captain or first lieutenant), one to two chaplains, one sergeant-major of the Sanitary troops, one non-commissioned officer as clerk.

An Ambulance is composed of one chief of ambulance (a medical officer ranking as captain), at least three medical officers (captains or first lieutenants) and in case of war three medical students, one quartermaster (first lieutenant or lieutenant), one apothecary officer (first lieutenant or lieutenant), four to six non-commissioned officers, ten "infirmiers," twenty to twenty-four bearers. The Mountain Ambulances are formed in case of necessity with the *personnel* of the ordinary ambulance, and equipped with the mountain material.

(*To be continued.*)

TAKA-DIASTASE.

BY GEORGE SUTTIE, M.D.

When I first contemplated making a report of cases in which this new amylolytic ferment was employed, I likewise intended to note the results accruing to certain laboratory tests made to verify, chemically, its claims. The latter, however, have been so thoroughly exemplified in *The Lancet* (London), the *Therapeutic Gazette*, and other journals, that I will confine myself to the clinical aspects, only remarking that I count Taka-Diastase fully able to perform all that has been asserted for it in the way of digestion of starch.

Case 1.—Mrs. C——, 62 years of age, consulted me for a condition supposed to be due to inability to digest proteids. All meats, eggs, etc., had been forbidden except in moderate quantity, though no restrictions whatever were laid upon carbohydrates. She complained of excessive bloating, palpitation, fainting, and suffocating spells that came so frequently as to render her practically an invalid—when at her best she was unable to walk more than a block; had lost all appetite, and partook of food only because she deemed it essential—the distress after eating was such she feared to ingest more than a few bits of bread or potato at a time; chronic constipation was also one of the factors in her trouble. I reversed the character of nourishment advised, permitted her to eat meat, eggs, etc., but forbade starchy foods as completely as possible. The constipation received due attention, and in consequence three days later I found her much better but anxious to know when she would be able to partake of bread and potato again. The day previous I had the pleasure of an introduction to Mr. Jokichi Takamine, the Japanese chemist, who was then in the city explaining the process of manufacture of his Taka-Diastase to Messrs. Parke, Davis & Co., and immediately bethought myself that Mrs. C—— would be an excellent patient upon whom to test the new ferment. Part of the sample I received from Mr. Takamine I gave to this lady, divided into twelve two-grain powders, at the same time withdrawing all restrictions as to the use of carbohydrates except as to the quantity to be taken the first day. As a result my patient became so much better that she expressed herself as being able thereafter to walk to my office, seven blocks away, should my services be again required.

May 19th Mrs. C—— called to inform me she could "eat anything"—had "not felt so well for more than a year." There was no longer any bloating or palpitation, and she declared the new remedy had made her "heart better too." I discontinued the use of the ferment, prescribed a mixture containing nux vomica, quinine, and cascara, and warned her to watch for any recurrence of the malady.

May 29th she called to report continued improvement. Three months later I met her on the street, a mile from home, whither she had walked with perfect comfort.

While it is possible the improvement in this case may have been due to the attention given to peristalsis, I am inclined to ascribe the greater benefit to the Taka-Diastase; and while I scarcely regard the ferment as curative *per se*, it appeared, in this case at least, to tide the patient along for a period sufficient to allow recuperation of the natural functions.

Case 2.—Stone-mason, aged 30 years, very much bronzed, but not apparently in need of medical care, informed me he was unable to retain food and was losing weight; for a number of days had been unable to work, and altogether was getting worse; for a long time had found it impossible to partake of fresh (and latterly even of stale) bread without great discomfort; had been under treatment at different hands for some weeks without benefit, and both he and his family feared he had become a victim of phthisis. I diagnosed subacute gastritis with amylaceous dyspepsia, and ordered a mixture containing bismuth and nux vomica; also, to assist carbohydrate digestion, twelve powders of Taka-Diastase, two grains each, to be taken after eating. I made no suggestions as to food, further than to indicate the quantity to be ingested during the first day or two.

Four days later he reported himself stronger than for a long time, and intimated his purpose of looking for work; he was now able to eat bread, potatoes, etc., without bloating or any unpleasant accompaniment. Vomiting had ceased with the first dose of Taka-Diastase.

It was in July that I saw this patient, and six weeks later I learned he could partake of almost any form of food, there having been no recurrence of the old trouble.

I can account for this condition of permanent benefit from a few doses of Taka-Diastase only in the same way as with Case 1.

Case 3.—Mrs. R——, six months pregnant, consulted me for stomach trouble; complained of bloating after eating, with accompanying pressure symptoms. I ordered ten powders, two grains each, of Taka-Diastase alone, seeing no occasion for medication other than to assist carbohydrate digestion. This secured permanent relief. I attended her in confinement three months later, and learned that she had had only one recurrence of the attack.

Case 4.—Mrs. G——, aged 40, complained of indigestion, bloating, a feeling of suffocation, etc., after the evening meal, that could only be relieved by eructation induced by massage of the abdomen; likewise of general irritability ("nervousness"), which at night prevented from sleeping and at times from even assuming the recumbent posture. Inquiry elicited the fact that bread, potatoes and carbohydrates generally were to blame for these attacks, although there was likewise uterine irritation with resultant leucorrhœa. The latter received no attention at this time further than an alum douche. As I was unable to secure Taka-Diastase, I resorted to other remedies, which gave temporary relief, and when they failed I was fortunately able to secure the ferment, which I prescribed in two-grain powders. These proved very satisfactory, or, as she expressed it, "did more good than any medicine she had ever taken."

Two weeks later Mrs. G—— requested more Taka-Diastase, as the former symptoms had returned, and I was somewhat puzzled that the remedy had been so inefficient until I learned that her servant had suddenly left, throwing the entire work of the household upon her shoulders. There was evidently a neurasthenic element involved, and no amount of diastatic digestion appeared to be of service. Finally I returned to the older remedies with some benefit, only to abandon them again for Taka-Diastase—after a new servant had been installed. I regret to say I never secured as satisfactory results from the medicament in this case as those obtained under its first use—a fact I ascribe to contingent causes.

Case 5.—This was a patient of Doctor Varney's, 47 years of age, of nervous temperament, who for some time had suffered from carbohydrate indigestion. He informed my colleague he had suffered from chronic fermentative dyspepsia for fifteen years, during which time he had been almost constantly under medical care but without permanent benefit. He was persuaded to try Taka-Diastase only because it was a new remedy, but was the reverse of hopeful as to results. Four grains given daily, directly after eating, secured marked improvement that was first manifested after the initial dose by disappearance of flatulence and distention. During the three weeks that the medicament was continued, the patient was gradually eating new foods, things he had not dared to taste for years. At this writing he eats everything, from the simplest of starches to pastry and mince-pie, without being obliged to resort to artificial aids to digestion.

My *confrère* declares that previous to tak-

ing Taka-Diastase this patient was habitually constipated—never secured a motion without an enema,—and that toward the end of the treatment his bowels began to operate spontaneously, there being general stimulation of peristalsis. The fact the patient is no longer compelled to resort to artificial aids to defæcation may be considered not the least of the benefits conferred by the medicament.

Case 6.—Mr. D——, aged 50 years, for three weeks endured no little misery from a rebellious stomach; his meals caused a sense of heaviness and oppression all the time, and on various occasions emesis only could afford relief; at times was troubled with flatulence, though this was not a constant symptom. I prescribed for him a dose of calomel, to be followed before meals by a bismuth mixture; Taka-Diastase to be taken immediately after eating. A week later he announced himself "perfectly comfortable," and at the end of a month asked for more powders, as he feared a recurrence of his trouble. He had unadvisedly renewed the bismuth mixture at the chemist's, but, deriving little benefit therefrom, had concluded the powders were necessary. From this circumstance I was able to judge of the proper amount of credit due to Taka-Diastase; and incidentally noted that it might be wise for the physician to personally dispense medicaments he desires to test, thereby preventing unauthorized repetition. I have, as yet, had no opportunity to know of the results accruing to the second treatment.

Case 7.—This was a patient of Doctor B. R. Shurly, to whom I am indebted for this report. The sufferer is a hopeless victim of phthisis, and was greatly troubled with rumblings and eructations of gas, due to indigestion; with a view to alleviating the latter, Taka-Diastase was prescribed. Relief was almost instantaneous, and continued so long as the medicament was employed; but latterly the patient was removed to hospital, and further information is not available.

Case 8.—Mrs. R——, aged 25, suffered from amylaceous indigestion, with the usual bloating and compression symptoms; no complaint of other trouble. Taka-Diastase was prescribed, and, as I have not seen the lady since, I take it for granted she was at least benefited.

Besides the cases noted I have given the remedy in four others where no definite irregularities were complained of: One was a case of diarrhœa; one simply of biliousness; one of dysentery; and the fourth complained of nervousness, preventing sleep at night. As other remedies to meet the individual indications were given in addition to the Diastase, I cannot claim special merit for the latter, although I consider it a prominent factor in the results that accrued.

***

Since writing the above I have learned that Case 4 has never suffered from indigestion to the same degree since the treatment of two months ago; I was also asked for a few powders that she might have them on hand to meet the trouble should it again supervene.

Detroit, Michigan.

EMPYEMA OF THE KNEE.*

BY WILLIAM L. RODMAN, A.M., M.D.

About five years since, a tinner who was working on the top of a house fell off and wounded the left knee-joint. He did not think at the time that a foreign body had entered the joint, although the skin was penetrated. Doctor Corrigan attended the case for five days, when I was called in consultation. The patient had a very high temperature and great swelling about the knee-joint, which evidently contained a great deal of pus, hardly explicable by the fact of simple external traumatism. The man was sure nothing had gone into the joint, but was willing to undergo any treatment; therefore a free incision was made into the joint, liberating not only a quart of pus, but a rusty headless nail which had been there for a week. The joint was irrigated every day for three weeks, afterward every other day. At this writing the patient has about as good a joint as he ever had. We feared anchylosis, for, in addition to the knee trouble, he had an extensive cellulitis extending from the middle third of the leg up to the hip; the inflammation was so pronounced that I think practically all of the cellular tissue of the thigh was discharged through numerous openings which it became necessary to make. Indeed, there was no cellular tissue left, and the case is interesting from that standpoint, as it has always been question-

* Read before the Louisville Clinical Society.

able whether or not cellular tissue ever so restores itself; some have claimed that the skin would adhere to the muscle and a great deal of trouble result. This case is a refutation of that idea, as it conclusively proves the cellular tissue does restore itself, as evidenced by the movement between the skin and the muscles. Numerous scars are left as evidence of the great number of incisions made to relieve the cellulitis. Two drainage tubes were introduced, making through-and-through drainage, and the joint was irrigated every day with a solution of zinc chloride. The articular ends of the bones had become considerably roughened, and had the case been allowed to go on a few days longer there would have been no cartilage on the end of the bone. The limb was undoubtedly saved by prompt interference.

Louisville, Ky.

THE POT AND KETTLE OF IT.

It is a mistake to accept the theories of enthusiasts, or the enunciations of impractical, inexperienced medical men, as proven facts, and change the entire therapeutic method in obedience to a "fad." The history of medicine is a history of "fads" without substantial basis, and this is the secret of the complaisance of the laity toward most arrant knavery. If the medical profession runs after charlatanism under the guise of science, little wonder the public at large patronize quackery dressed up as medical art. Matteism is no worse than Kochism, Pasteurism, Bheringism, and not nearly so dangerous.

PATHOLOGY OF EXOPHTHALMIC GOITRE.

Doctor Reinhold, in the *Münchener Medicinische Wochenschrift*, expresses the opinion the seat of the malady is in the thyroid gland. And this contention is apparently supported by clinical experience, as a recent writer (in the Philadelphia *Medical and Surgical Reporter*) calls attention to the fact that a large number of cases of Basedow's or Graves's disease develop from simple goitre. He remarks that among thirty cases of exophthalmic goitre he never yet observed the thyroid gland free from disease and enlargement.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

DEATH FROM RUPTURE OF THE SPLENIC ARTERY.

Editor MEDICAL AGE:

The evening of August 22d I was called to see a lady, thirty-six years of age, who had always enjoyed the best of health, but was now suffering severe pain over the fourth intercostal nerve; pulse 80; temperature 99°. Father died from valvular disease of the heart; mother from diabetes.

She had vomited once—after a very hearty supper; and as I could discover no serious trouble she was given a hypodermatic injection of one-eighth grain of morphine with one-two-hundredth grain atropine; also, a hot-water bag was ordered to painful part.

The succeeding day she was apparently better, and I then prescribed arsenite of soda, and left morphine in case pain should again become agonizing. The second morning (the 24th) she apparently felt quite well; had rested nicely during the night; no pain; indeed, was so well I dismissed her, with directions to keep quiet, and to take arsenite of soda three times daily for a few days.

About noon of this day, and while lying in bed, she called to the servant, declaring she was suffering great pain in the side, was very faint, and feared she was dying. Five minutes later she was dead.

As I was out of town I did not see her until two hours after her demise. I requested a post-mortem, which was readily granted.

She was a very large woman, with considerable adipose; and when the peritoneal cavity was opened a great quantity of blood poured out—ten pints by measure, besides what was lost. I examined carefully every organ except the brain, finding no pathological changes save in the spleen, and a slight enlargement without degenerative change in the liver. In attempting to remove the former organ it broke down under touch, very much as would a blood clot; there were spots of softening as large as a silver half-dollar, and the organ as a whole was in a badly degenerate state. Nevertheless there was no pus, no cavities, or other evidence of abscess. There were, however, two aneurysms of the splenic artery about half an inch apart, close to where the artery entered the organ, and at this point rupture had occurred, which was the cause of the internal hæmorrhage that culminated in death.

I gave very close examination to the heart, kidneys, liver, and large blood-vessels, but,

as already remarked, with the exception noted everything was normal. Exactly what was the character of the degeneration of the spleen, and the cause therefor, I am unable to determine.

W. H. Erwin.

Oak Grove, Michigan.

NUCLEIN EXPERIENCE.

Editor Medical Age:

I am becoming greatly interested in the new medicament Nuclein; have employed it in syphilitic anæmia, tubercular glands of neck, and malarial intoxication with its resultant anæmia.

The syphilitic patient had been under treatment for constitutional syphilis for some eighteen months. The rigorous anti-syphilitic treatment, *plus* the malady itself, caused him to become very anæmic—in fact (to express myself more emphatically) malignantly so. I made use of various stimulating tonics advised and followed by the profession in general, without any success. Then I secured a supply of Nuclein, which, having thoroughly acquainted myself with the literature on the subject, I commenced to use.—By way of parenthesis I may say I have followed the method as directed by Professor Vaughan in every detail, and can only repeat his already given precaution—of using strict asepsis in giving the injections.

At the end of sixty days I found my patient had entirely regained his normal condition; he now slept well, had gained some twenty pounds in flesh, and, to use his expression, "Never felt better."

My next case was one of tubercular degeneration of glands of neck; there was not a gland element in this region that was not involved, hence surgical interference was impossible. This case was also seen by my colleague, Doctor C. H. Grimm, who was astonished at the great amount of destruction going on. The collateral symptoms of this condition are so common and so well understood, I refrain from detailing them.

This patient has received at my hand 100 injections of Nuclein, with the result that his appetite has become normal, he has gained fourteen pounds in flesh, the general cachexia has disappeared, the glandular lesions are vanishing—in fact, the sum total of his present condition is that he is practically a new individual.

Mrs. ——, from Louisiana, consulted me regarding her general health, and I found her suffering from enlarged spleen. There was marked malarial cachexia, general anæmia, murmur at base of heart, general lack of appetite, and certain stomachic disturbances attributed to "dyspepsia." I tried the usual course of iron, digitalis, strychnine, malt preparations, etc., without relief. Then began using Nuclein, and after some twenty injections she became much improved. To-day her cachexia has almost disappeared; appetite has returned; she has gained seven pounds in flesh, and thinks she feels like "*The New Woman.*"

From these three cases I am highly impressed with the therapeutic and physiologic value of the new medicament, and cannot too highly commend its discoverer for the boon he has conferred upon the profession especially, as well as upon suffering humanity at large.

Robley D. Johnson.

San Francisco, California.

TAKA-DIASTASE IN THE TREATMENT OF DYSPEPSIA.

Editor Medical Age:

Diastase dissolves the starchy substances which make up a large and important part of ordinary food, and transforms it into assimilable dextrin and maltose. The new Taka-Diastase has properties similar to the ptyalin of saliva and the amylopsin of pancreatic juice; by its aid the digestion and assimilation of starchy food becomes an easy matter, not only in infants and the aged, but in convalescents; and even in normal digestion it is of value, because we consume a larger quantity of food, as a rule, than the body demands, and the digestive apparatus is thus overtaxed.

Taka-Diastase when administered in dry powder is far more reliable and efficient than when given in solution. Diastase is materially injured by the means employed to make and keep a stable solution thereof.

The first act of digestion is that performed by the saliva, whereby starch is turned into maltose. Nature intends all food to be thoroughly impregnated with saliva and its ptyalin, and this must be done by thorough mastication. The stomach has also to do with the digestion of the starch at first. Now where there is faulty digestion of starch foods, dyspepsia, so-called, supervenes; and when an individual becomes the subject of this hydra-headed monster, more suffering and trouble result than ever sprang from "Pandora's Box." Here Taka-Diastase meets all the requirements by ensuring complete digestion. In my hands it has proved a wonderfully satisfactory agent.

W. Gayle.

Kansas City, Mo.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., SEPTEMBER 25th, 1895.

Editorial.

WORTHY OF TRIAL.

The securing of proper safeguards about the retail liquor traffic has long been a *quæstio vexata*. Recently the *New York Medical Times* offered the suggestion that New York City adopt the law peculiar to Denmark, which requires the police, if they find a drunken man on the street, to summon a carriage, place the unfortunate inside, drive him to the police station, and there detain him until fairly sober; then to drive him home. He is never out of police charge until he is safe with his family. The charges of the cabman, of the police surgeon, and of the police office, are then combined in a bill which is presented by an official of the Police Bureau to the proprietor of the establishment where the intoxicated individual received his last and overpowering glass; and the payment of this bill is rigidly enforced.

The *Times* remarks "this system works well in Copenhagen," and seems to think it would be much more easily enforced than any of the excise laws existing in the United States, besides being productive of the greatest amount of good.

The idea is certainly worthy of further consideration. If it can be made to work successfully in a city as large as the capital of Denmark, there certainly is no reason why it should not be equally effective in smaller towns. Its application in the United States would have a restraining influence upon the liquor-seller, and render him cautious how he dispensed to those unfit to receive. It would likewise have a tendency to crowd out of business the class of saloon-keepers that now predominate—a class utterly regardless of any obligation, either legal or moral.

Another desideratum appears to be the strict enforcement of laws that will prevent licenses being issued to irresponsible parties. There should also be authority to revoke licenses for cause. When straw bonds can be done away with, and the rule enforced that no person interested in the sale of liquor can appear upon the bond of another spirit merchant, then and then only can it be expected that the traffic will be brought within honest and legitimate channels. The addition of the Denmark law, if it can be enforced, certainly would be desirable and tend to overcome that greed which allows men to sell intoxicating beverages to individuals who are already far gone under the influence of spirits.

MEDICAL JOURNALISM, PAST AND PRESENT.

A copy of *The Medical Examiner*—"A Monthly Record of Medical Science"—for June, 1854, edited by Samuel L. Hollingsworth, M.D., and published by Lindsay & Blakiston (now P. Blakiston, Son & Co.), of Philadelphia, has reached us through the kindness of some unknown friend.

In the list of collaborators of the *Examiner* appear such names as John Bell, John B. Biddle, J. DaCosta, Robert A. Given, Addinell Hewson, Edward Hartshorne, Samuel Jackson, Wilson Jewell, Francis W. Lewis, Samuel Lewis, Caspar Morris, John F. Meigs, John Neill, William Pepper, W. S. W. Ruschenberger, Francis Gurney Smith, Alfred Stillé, F. W. Seargeant, and Moreton Stillé—all remembered by the older generations of practitioners as men who gave especial character and *éclat* to the profession of forty years ago.

The Table of Contents embraces the following "Original Communications:"

A Case of Tubercular Peritonitis, with Remarks upon the Association of Oily Liver with Tubercular Phthisis: by James Darrach, M.D., Resident Physician at the Pennsylvania Hospital.

A Case of Monstrosity: by D. M. Hudson, M.D., Bedford County, Pennsylvania.

On Filtration of Air in Connection with Fermentation and Putrefaction: by H. Shroder and Dr. Th. von Dusch.

Observations on the Existence of Cellulose in Man: by R. Virchow.

The Bibliographical Notices deal with:

A Report of the Hospital at Ningpo, China: by Daniel J. Macgowen.*

Elementary Chemistry: by George Townes, Ph.D.

Types of Mankind; or, Ethnological Researches based upon Ancient Monuments, Paintings, Sculptures, and Crania of Races, and upon their National, Geographical, Philological and Biblical History; illustrated by selections from the unedited papers of Samuel George Morton, M.D., late President of the Academy of Natural Sciences at Philadelphia, and by additional contributions by Prof. L. Agazziz,† LL.D., W. Usher, M.D., and Prof. H. S. Patterson, M.D.: by J. C. Nott, M.D., of Mobile, Alabama, and Geo. R. Gliddon, formerly U. S. Consul at Cairo.

Transactions of the American Medical Association.

A Practical Treatise on the Uterus, its Cervix and Appendages, and on its Connection with Uterine Disease: by James Henry Bennett, M.D.

First Principles of Medicine: by Archibald Billing, M.D., A.M., F.R.S., etc.

The sole "editorial" deals with the session of the American Medical Association at St. Louis, Mo., the month before, and this is supplemented by a very complete account of the proceedings under the caption of "Reports;" and under heading of "Record of Medical Science" appears a very comprehensive abstract from the *Edinburgh Monthly Journal of Medical Science* on "The Diagnostic Value of the Absence of Chlorides from the Urine."

The advertising columns are no less interesting. First appears a notice of "Homœopathy, its Tenets and Tendencies, Theoretical, Theological, and Therapeutical," by Sir James Y. Simpson, M.D., F.R.S., followed by "Homœopathy Fairly Represented—A Reply to Professor Simpson," by William Henderson, M.D. It is notable *both authors were professors in the University of Edinburgh*—one of obstetrics, the other of pathology. "Diseases of the Heart and the Aorta," by William Stokes, of Dublin, is heralded as an "important medical book," a truth just as apparent in 1895 as in 1854. Other books noted are Paget's "Surgical Pathology," Headland "On the Action of Medicines"—both of which will always remain classics; Meigs on "Diseases of Children;" Wythes' "Microscopist;" Henle's "General Pathology;" Tilt's "Principles of Female Hygiene;" Walton's "Ophthalmic Surgery;" Handy's "Text-book of Anatomy;" Littell's "Manual of Diseases of the Eye;" Brierre de Boismont's "Hallucinations;" Piggott's "Dental Chemistry and Metallurgy." It appears also that Lindsay & Blakiston published American editions of the *British and Foreign Medico-Chirurgical Review* (a quarterly) and the *London Microscopical Journal.* Ranking's *Half Yearly Abstract of the Medical Sciences* was in its ninth volume.

The Castleton (Vermont) Medical College and the Albany Medical School offered "two full courses of lectures of sixteen weeks each, annually." Francis Gurney Smith, J. M. Allen and John J. Reese were "associated for the purpose of giving office instruction to students of medicine." The Baltimore College of Dental Surgery announced its fourteenth session. Wiegand & Snowden, and likewise Horatio G. Kern, appear as manufacturers of surgical instruments and appliances. John F. Ord manufactured a "metallic skeleton artificial leg" and "patent graduating spring ankle supporter." George Ashmead dealt in drugs, chemicals, and anatomical preparations, while George H. Ashton and Bullock & Crenshaw called attention to the fact of their being wholesale druggists and manufacturing chemists. The latter firm listed as specialties—which is evidence therapeutics has not progressed nearly so much as imagined, on legitimate lines at least—the following:

Acid arsenic; acid gallic; acid hydrocyanic, U. S. P.; alcohol, absolute; arsenicum, pure sublimed; atropia; bebeerine; bebeerine sulphate; brucia; cantharadine tissue, Brown's; dressing tissue, Brown's; cinchonine; chinoidine; chloroform; collodion; collodion, cantharidal; codeine; cod-liver oil, pure; Cheltenham salt; delphia; elaterium (Clutterbuck's); emetine; ext. belladonna, fresh

---

*Who at this early date appears to have laid the foundation for the title of "Modern Ananias," since acquired. Doctor Macgowen, it will be remembered, is the author of the "yarns" that the Chinese make "wild men" by gradually engrafting upon children bits of skin from animals until the latter wholly replace the natural integument—having first made the victims dumb by some unknown secret drug; also that monkeys in China, near the Great Wall, manufacture *two kinds* of wine, which they keep in gourds or clay receptacles.—Ed.

†Evidently a typographical error.—Ed.

English; ext. cannabis indica, English; ext. conium; ext. cotyledon umbil., fresh English; ext. hyoscyamus, fresh English; ext. taraxacum, fresh English; iron by hydrogen, Quevenne's; iron and magnesia citrate; iron and quinine citrate; glycerine; kino, genuine; iodine, resublimed; iodide of iron; iodide of arsenic; leaves—fresh English aconite, fresh English belladonna, fresh English conium, fresh English hyoscyamus, fresh English sabina, fresh matico; lupuline; lycopodium; mannite; oxgall, inspissated; piperine; resin of jalap; strychnia; tannin; veratria.

Of the exchanges only nine survive, though others have since arisen bearing the same titles. The list comprises:

The American Journal of Medical Sciences, *Medical News*, *New York Medical Gazette*, *New York Medical Times* (the present *Record*), *New York Journal of Medicine*, *American Journal of Insanity*, *American Medical Monthly*, *New Jersey Medical Reporter*, *Nelson's American Lancet*, *Boston Medical and Surgical Journal*, *Buffalo Medical Journal*, *Virginia Stethoscope*, *New Hampshire Journal of Medicine*, *Upper Canada Journal*, *Montreal Medical Journal*, *Western Journal of Medicine and Surgery*, *Ohio Medical and Surgical Journal*, *Charleston Medical and Surgical Journal*, *New Orleans Medical and Surgical Journal*, *New Orleans Medical News and Hospital Gazette*, *Southern Journal of Medicine and Physical Sciences*, *Nashville Journal of Medicine and Surgery*, *Northwestern Medical and Surgical Journal*, *Iowa Medical Journal*, *Kentucky Medical Recorder*, *Western Lancet*, *Peninsular Medical Journal*, *American Journal of Dental Sciences*, *British and Foreign Medico-Chirurgical Journal*, *Monthly Journal of Medical Science*, *Edinburgh Medical Journal*, *The Lancet* (London), *Medical Times and Gazette* (London), *Medical Press* (Dublin), and *Pharmaceutical Journal* (Dublin).

Taken as a whole, advertisements included, this old journal compares most favorably with the best publications of to-day. In literary character, originality, practicability, and cleanliness of advertisements—indeed, in all that goes to make up a first-class periodical—it is doubtful if an equal can be found in the English language at the present day. There are no proprietaries, patents or misleading synthetics mentioned; no editorial laudations of nostrums; and its pages are not sullied by the contributions of tyros and novices assuming the rôle of "authority" while retailing second-hand the immature observations of their equally ignorant predecessors. Indeed, medical journalism as a part of literature appears to be rapidly becoming a "lost art," and just at present is in the main posing as a most subservient tool of the charlatan and nostrum-monger.

EVIL LEGISLATION.

The Assembly of the State of New York has before it a bill to make permanent provision for the treatment of persons supposed to have been bitten by rabid animals, or in danger of infection with rabies, at a so-called Pasteur Institute. This is part of the pernicious system of State medicine which, if carried out in all the phases that have been proposed in the past few years, will eventually farm out the care of the ill to practitioners with a "political pull."

There has never been any evidence adduced to prove that Pasteurism has ever prevented the development of a single case of hydrophobia. More than that, neither Pasteur or any one else has given any evidence as to what hydrophobia is. Indeed, the pith of the measure introduced into the New York Assembly appears to be the support of an institution that is not needed, and whose benefits accrue only to one individual—its founder.

EDITORIAL NOTES.

Index Medicus.—

The list of subscribers to the special fund up to September 23d, 1895, inclusive, is as follows:

New York State Library, per Melvin Dewey, Albany, N. Y.	$25 00
A. Vander Veer, M.D., Albany, N. Y.	25 00
Samuel B. Ward, M.D., Albany, N. Y.	25 00
Medical Department University of Michigan, per Victor C. Vaughan, M.D., Dean, Ann Arbor, Mich.	25 00
Chas. O'Donovan, M.D., Baltimore, Md.	25 00
Wm. Osler, M.D., Baltimore, Md.	25 00
H. A. Kelly, M.D., Baltimore, Md.	25 00
L. McLane Tiffany, M.D., Baltimore, Md.	25 00
I. E. Atkinson, M.D., Baltimore, Md.	25 00
W. S. Halsted, M.D., Baltimore, Md.	25 00
Henry M. Hurd, M.D., Baltimore, Md.	25 00
Henry D. Holden, M.D., Brattleboro, Vt.	25 00
Medical Society Kings County, per W. Browning, M.D., Brooklyn, N. Y.	25 00
F. W. Henkel, M.D., Buffalo, N. Y.	25 00
P. S. Conner, M.D., Cincinnati, Ohio.	25 00
F. Forchheimer, M.D., Cincinnati, Ohio.	25 00
Cincinnati Hospital Library, Cincinnati, O.	25 00
Cleveland Medical Library, Cleveland, O.	25 00
Dudley P. Allen, M.D., Cleveland, Ohio	25 00

Henry K. Cushing, M.D., Cleveland, Ohio, 25 00
Colorado Medical Library Association, Denver, Colorado, 25 00
H. O. Walker, M.D., Detroit, Mich. 25 00
Young J. Pentland, publisher, Edinburgh, Scotland 25 00
J. P. Johnson, M.D., Galveston, Texas 25 00
Bibliothèque Universitaire, Lille, France 25 00
Royal College of Surgeons, London, Eng. 25 00
R. Newton Hawley, M.D. (Milwaukee Medical Society), Milwaukee, Wis. 25 00
Orleans Parish Medical Society, per S. W. Deland, New Orleans, La. 25 00
S. E. Chaille, M.D., New Orleans, La. 25 00
John B. Elliott, M.D., New Orleans, La. 25 00
Edmond Souchon, M.D., New Orleans, La. 25 00
Rudolph Matas, M.D., New Orleans, La. 25 00
Fred H. Wiggin, M.D., New York City 25 00
G. T. Jackson, M.D., New York City 25 00
J. S. Thacher, M.D., New York City 25 00
John A. Fordyce, M.D., New York City 25 00
New York Academy of Medicine, New York City 25 00
Geo. T. Elliot, M.D., New York City 25 00
Willy Meyer, M.D., New York City 25 00
St. Lawrence State Hospital, Ogdensburg, N. Y. 25 00
Charles E. Sajous, M.D., Paris, France 25 00
Charles Richet, M.D., Paris, France 25 00
John B. Roberts, M.D., Philadelphia, Pa. 25 00
E. E. Montgomery, M.D., Philadelphia, Pa. 25 00
J. C. Wilson, M.D., Philadelphia, Pa. 25 00
William Pepper, M.D., Philadelphia, Pa. 25 00
DeForest Willard, M.D., Philadelphia, Pa. 25 00
S. Weir Mitchell, M.D., Philadelphia, Pa. 25 00
George M. Gould, M.D., Philadelphia, Pa. 25 00
H. C. Wood, M.D., Philadelphia, Pa. 25 00
Wm. W. Keen, M.D., Philadelphia, Pa. 25 00
J. William White, M.D., Philadelphia, Pa. 25 00
Library Pennsylvania Hospital, Philadelphia, Pa. 25 00
Wm. B. Van Lennep, M.D., Philadelphia, Pa. 25 00
Capt. V. Vischer, Philadelphia, Pa. 25 00
F. X. Dercum, M.D., Philadelphia, Pa. 25 00
Quincy Public Library, Quincy, Illinois 25 00
Hunter McGuire, M.D., Richmond, Va. 25 00
John O. Roe, M.D., Rochester, N. Y. 25 00
S. H. Pinkerton, M.D., Salt Lake City, Utah 25 00
Charles Wood Fassett, Secretary American Medical Publishers' Association, St. Joseph, Mo. 25 00
C. A. Wheaton, M.D., St Paul, Minn. 25 00
San Francisco Medical Society, per D. W. Montgomery, M.D., San Francisco, Cal. 25 00
E. L. Trudeau, M.D., Saranac Lake, N. Y. 25 00
Henry L. Elsner, M.D., Syracuse, N. Y. 25 00
Medical Department U. S. Army (10 copies), Washington, D. C. 250 00
Library Surgeon-General's Office (2 copies), Washington, D. C. 50 00
Medical Department U. S. Navy (2 copies), Washington, D. C. 50 00
U. S. Marine Hospital Service (1 copy), Washington, D. C. 25 00

$2000 00

Docking.—

Last year one hundred and two well defined cases of lockjaw were reported to the Royal Society for the Prevention of Cruelty to Animals, London, with a certificate in each case from the attending veterinarian that the malady resulted from docking; and one single veterinarian stated that out of thirty-one cases of tetanus which he had been called to attend within a year, twenty-seven had resulted from this same brutal custom.

In the interest of humanity, every medical man should put himself on record as opposed to such mutilation of the "noblest of animals."

Homœopathy in Mexico.—

We have recently been favored with an exchange, published in the City of Mexico, entitled *La Homœopatica.*

It is only within a few years that homœopathy has been recognized in the sister republic, and less than thirty months since the first homœopathic hospital was inaugurated under the special protection of President Diaz. According to a report recently issued, this hospital has treated 40,000 patients since its establishment, and it is expected the number during the current year will reach two-thirds this figure.

The Montreal Medical Journal.—

Our contemporary, the *Montreal Medical Journal*, appears in a new, improved and enlarged form, that will undoubtedly be appreciated. The price has likewise been advanced, but the advantages anticipated will abundantly indemnify its patrons. We wish the *Journal* a continuation of the success it has so justly achieved.

American Public Health Association.—

This well known organization will hold its twenty-third annual meeting in Denver, Colorado, Tuesday, Wednesday, Thursday, and Friday, October 1st to 4th. It is expected one-and-a-third-fare rates will be granted by the railroads for the round trip.

Items and News.

A Curious Phenomenon in Ornithology.—

Many curious observations have been made with respect to the voracity of certain birds, as also to the combats which they are at times obliged to sustain with the different animals chosen for their subsistence. The following case is extraordinary:

During May last a friend, in plucking some young starlings which he had removed from a nest placed in an old wall, was greatly surprised to find that one had its stomach perforated by a lizard, of which the entire middle of the body adhered closely to the viscera. Considering such a phenomenon worthy of note, he had the kindness to permit us to examine it, and it would seem to be one of the rarest pathological freaks ever encountered. The bird was perhaps six or seven weeks old; the œsophagus as wide as a little goose-feather, with no apparent alteration; the stomach (or gizzard rather), of the dimensions of a pigeon's egg, but toward its left portion and a little toward the posterior part was a circular opening of forty millimeters which gave passage to the anterior half of the gray lizard's body, about which was fastened the mucous membrane of the gizzard over an expanse of three to six millimeters. The intestinal mass presented nothing peculiar and contained only the residue of the digested substances.

The lizard presented the ventral portion of its body extending forward, and measured five centimeters from the cephalic to the part strangulated by the stomach of the bird; the forward feet were elevated. The skin had conserved its normal characteristics. The circumference of the body at its emergence from the stomach was forty-three millimeters, at the middle fifty-three millimeters, and near the head twenty-eight millimeters, the posterior portion comprising the hind feet; the tail had completely disappeared. This lizard must apparently have measured fifteen centimeters in length.

It may be supposed the lizard was seized by the bird, and not fancying this unexpected engulfing, and seeking to escape, worked a passage with the aid of its claws and teeth through the stomach of the imprudent starling; but, presently exhausted by its impotent efforts, compressed by the muscular contractions of its narrow visceral prison, and furthermore deprived of air, it was forced to succumb.

As for the starling, what a wretched quarter-hour it must have spent! It is surprising it continued to live. Contrary to the caution which the pathological condition demanded, the unhappy bird still found means to digest the entire portion of its prey which could not escape.

The case presents several points of view. It shows first the extent to which the voracity of a young bird may go, the extreme elasticity of its œsophagus, and its digestive powers. It is a proof of a vital resistance and reparative rapidity which are rarely found in any organism. Also it furnishes a remarkable example of the new species of epidermic graft, the production of which may be explained in the present case by the analogy existing between the horny nature of the mucous membrane of the bird's stomach and the shagreened skin of the lizard. Finally, quite apart from any scientific consideration, the case is one of the most curious and is certainly unique in the history of birds.—*Nature.*

The Dark Side of Surgical Technique.—

Professor George S. Shiels, of San Francisco, read a timely paper before a late meeting of the California Academy of Medicine, calling attention to the reproach that asepticism is liable to bring upon true surgery and upon our *fin-de-siècle* surgeons. There is at present a tendency to ignore the fact that a combination of anatomist and trained hospital attendant does not by any means constitute all there is of a surgeon. The science and practice of surgery is giving way as a study to simple operative techniqne. One man will attend a few operations upon the abdomen in a New York, Philadelphia, or Baltimore school, watch the best masters, and, having carefully rehearsed the technique, fall into the error of believing he has learned all there is of surgery, and that all he requires to render him a great success is a series of laparotomies, over which he will gloat with the delight of an Indian brave over a string of scalps; the desire for a rounding-out of a "series" often leading such a one to entirely overlook the individual necessities or the nature of the case, which is then theatrically operated upon to its detriment and to the prostitution of surgery. As observed by Professor Shiels, more pathology and diagnosis should precede the superabundance of technique.—*National Popular Review.*

How to Succeed as a Druggist.—

"I noticed," said the druggist to his assistant, "that a gentleman came in with a prescription, and that you took it and gave him the stuff in about three minutes. What do you mean by that?" "It was only a little

carbolic acid and water," replied the assistant; "I simply had to pour a few drachms of acid into the bottle, and fill it up with water." "Never mind if you had only to do that," the druggist declared. "Don't you know that every prescription must take at least half an hour to fill, or the customer will think he isn't getting anything for his money? When a prescription for salt and water or peppermint and cough-syrup is handed to you, you must look at it doubtfully, as if it were very hard to make up. Then you must bring it to me, and we will both read it and shake our heads. After that you go back to the client and ask him if he wants it to-day. When he says he does, you answer that you'll make a special effort. Now a patient appreciates a prescription that he's had so much trouble over, and when he takes it he derives some benefit from it. But don't you do any more of that three-minute prescription business, my boy, if you want to become a first-class druggist."—*Sheffield Telegraph.*

The Care of the Aged.—

When a man or woman passes seventy years of age, great care should be given to the conditions surrounding him or her for the prolonging of life. The vital forces are greatly enfeebled at that period of life, and the powers of resistance, in consequence of age, are the weakest. A man of three-score years and ten, and over, is like an old machine that by proper care given to its condition has been kept running many years, and is still able to do work, but its wheels and axles and pinions are much worn and are rickety, and if it should be pushed, even to a small extent, in excess of its diminished powers, it breaks down and cannot be repaired, for every part of it is shattered. But if worked carefully and intelligently by a person who understands its condition and knows its capabilities, it can be kept in action a much longer time than would be possible if a careless engineer controlled it. In these fast times, however, it is generally not profitable to husband the resources of an old machine. But this is not true as regards our old men and women. It is desirable to hold on to them as long as possible, and if we can succeed in prolonging their lives five or ten years, or more, it will greatly enhance our happiness.—*Medical Review.*

"Authority."—

Abroad the question is, not whether a thing is true, but whether it emanates from "authority." The natural result of such a condition of affairs is that every possible effort is put forth to become an "authority."

For years in a populous European centre, the wrong operation was performed in a certain pathological ocular condition, because it was the decree of a prominent "authority!"—hundreds of trusting patients were injured annually because no one dared to differ with this medical autocrat.

When such conditions obtain, medical progress must be slow and erring. To become an "authority," it is only necessary to secure notoriety—devise a new operation, whether mistaken or not; discover a new microbe, whether it exists or not; or prepare some revolting animal preparation.

Real progress is made by the man who puts self behind his work, who investigates the premises of an argument before he subscribes to it. Students need to learn something more practical concerning medical science than the colonization of bacteria or the decimation of the animal kingdom.—*Medical Brief.*

Cimex Lectularius and Phthisis.—

Parisian scientific circles are exercised over the discovery that bedbugs are active agents in the transmission of the bacillus of tuberculosis from one person to another. This should at once dispose of the use of the old clumsy wooden structure and favor the introduction of the iron bedstead. This discovery need not, however, prevent our millionaire heiresses from consummating marriages with French counts and others of the old nobility, as the ample means that our American women carry over with them will enable them to send the escutcheoned four-posted old ancestral bedbuggy bedstead formerly employed by the count to the second-hand store around the corner, while its place will be filled either by the polished brass or a white japanned iron bed-frame.—*National Medical Review.*

Next will come the bacillus bedbugosis!—*North American Review.*

Pasteurism Rivaled.—

"There is nothing new under the sun," said Solomon, and even Pasteurism was antedated in Soudan. Doctor Tonkin declares that in Kano, Haussa State, Western Soudan, when a person is bitten by a dog supposed to be suffering from rabies, the offending animal is instantly caught, killed, and cut open, the liver taken out and slightly browned by being held to the fire, after which the whole of the organ is eaten by the patient. It is generally believed this prevents the onset of the disease. It is interesting to notice the similarity which exists between this method and that of Pasteur; also to note

that Parisian statistics show that the mortality from dog-bites is as great now or greater than before Pasteur opened his institution.—*Exchange.*

New Ethics.—

I consult with all educated, scientific physicians, whether they give big, medium, or small doses. And thus I have very often gained information very valuable to myself, as well as seen the sick relieved. All the various medical schools teach the same general truths in regard to anatomy, physiology, chemistry, surgery, and would also teach the same materia medica if they understood general materia medica; and they would teach the same great science of therapeutics if they would study broader views of scientific medicine. Physicians differ in regard to a few new remedies, but finally they investigate them and adopt them.—Doctor Joseph Adolphus.

The Usual "Rot!"—

An English temperance agitator, Miss Weston, publishes in "Ashore and Afloat," under the caption of "A Drunkard's Brain—No Joke, but Awful Truth," a statement that at an inquest recently held upon a noted drunkard, on opening his skull "the odor of alcohol that filled the room was sickening. One of the surgeons then struck a match and held it close to the head, and immediately a blue flame enveloped the whole of the exposed brain." Miss Weston seems to regard truth as a matter of slight importance compared to the virtue of total abstinence.—*Medical Record.*

A Discovery?—

The fact that animal tissues can be stimulated by gradually increasing doses of a poison until they fail to respond, is heralded to the world as a great discovery, which it is proposed to use as a basis in perfecting a therapeutic system. In other words, saturate the system with poison, so that if a man is exposed to disease his tissues can no longer take cognizance thereof. This is about as rational as keeping a man drunk all the time that he may not crave liquor.—*Medical Brief.*

Death on the Bicycle.—

A pharmacist of Dublin was cycling homewards, and had just ridden up a very steep ascent, when he suddenly dismounted, blood pouring from his mouth and nose. He rushed into a chemist's shop, and was in the act of taking a bottle of medicine from a shelf behind the counter when he fell to the ground, and died almost immediately. The inquest showed the deceased's lungs had several large cavities, caused by over-exertion. —*Chemist and Druggist.*

Camphor Fiends.—

The recent discovery, on the streets of St. Louis, of a woman unconscious from the effects of an over-indulgence in camphor, has brought to light the fact that the habit, while a strange one, is by no means a rarity; a number of druggists and physicians testify to this. Camphor-eating is not so pronounced an evil as the excessive use of some other drugs, but it is nevertheless an existent evil. —*North American Medical Review.*

A Rare Anomaly.—

M. Pean, the French surgeon, lately performed a successful operation on a young girl who suffered from incontinence of urine, caused by the presence in her vagina of a supernumerary bladder and urethra. Cases of this description are extremely rare, and where they do occur it is rarer still to find them entirely amenable to art.—*Provincial Medical Journal.*

An Economist.—

"If you insist on knowing the truth, Madam," said the doctor, "your husband will not live twenty-four hours longer." "Good gracious!" ejaculated the broken-hearted but economical wife, "and yet you have sent in medicine enough for five days." —*Fliegende Blätter.*

The Millennium.—

The regular lion lies down with the homœopathic lamb, and the little eclectic child is leading them! We see the regular physician lecturing side by side with professors of homœopathic schools, and homœopathic schools advertised in regular journals.—*American Medical Journal.*

It is a Mistake.—

To discard any method which has given good results unless you are positive you have a better one. It is also a mistake not to adopt a new method which has proven to be better than the old.—*Exchange.*

Leprosy.—

Doctor James N. Hyde is authority for the statement that there are 560 lepers in the United States, California leading as their place of abode with 158.—*Atlantic Medical Weekly.*

Book Reviews.

REVIEW OF REVIEWS. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The September number deals notably with the recent Catholic Abstinence Union; Russia's Abolition of Private Dramshops; the Atlanta Exposition; the Dedication of the Military Park at Chickamauga; New "Puritanism;" the Massacres in China; the Liberal Reserve in Great Britain; and the Cuban Revolution. In "Current History and Caricature" there is a suggestion for American national committees in 1896. Also is given a brief account of the electrical power transmission with which the name of Nicola Tesla is associated.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

The September issue contains: "The Pope at Home," by Bernard Morgan; "Buddhism versus Christianity," by Mgr. Charles de Harlez; "The Passion Play in America," by Maibelle Justice; "Cousin Clara," a story, by Frank H. Sweet; "Leaders of Men," chapter II, by Mary E. Blake; "Pedro," by Ross B. Franklin; "From Love to Martyrdom," by Laure Conan. There are the usual departments.

THE PETERSON MAGAZINE. Price, 10 cents; $1.00 a year. Penfield Bros., New York.

The principal articles of the September issue are: "George Washington" (fourth installment), by T. J. Mackey; "The Carnegie Library of Pittsburg," by Elmer E. Garnsey; "Bob's Protégé," by Charles E. Reed; "Bob's Winter Fuel," by Edna C. Jackson. There are the usual "Said in Passing," "Publishers' Page," and "Poems."

A FREE LANCE IN A FAR LAND. By Herbert Compton. Cloth; 16mo; pp. 373. Price, $1.00. The Cassell Publishing Co., New York.

This is the most delightful work of fiction that has come under our eye for many months. It purports to be the account of "the singular fortunes of Selwyn Fyfeways, Esquire of Fyfeways Hall, in the County of Gloucester, for seven years a free adventurer of the Kingdom of Hindustan — the same abridged from the original papers and journals of Mr. Fyfeways from certain traditions in his family." The volume is divided into three parts; in the first, young Mr. Fyfeways, who is a posthumous son, is cheated of his patrimony by his father's sister and her husband, who endeavor to secure the inheritance for their own offspring, and are aided therein by a scheming Jesuit priest, who performed the marriage ceremony between Mr. Fyfeways' father and mother, and subsequently robbed the latter of her wedding ring and marriage license. In a quarrel between the priest and Mr. Fyfeways the former is stricken down, and the latter fearing he has committed murder runs away from home, falls into the hands of an ex-army sergeant, and finally into the hands of crimps, who sell him to the "John Company" and he is shipped off to Hindustan to serve as a soldier. In the second book, feeling under no obligations to a Company which has thus kidnapped him, Selwyn Fyfeways deserts and takes service under the Mahratta flag. Discovering a plot against his life by his employers, he takes his troops over to the service of Rana Bheem Sing, by whom he is eventually appointed governor of a province of Mundalgurh. As the Rana subsequently plots against him, Fyfeways throws off all allegiance and proclaims his province independent. Later he is defeated and taken prisoner by a General Tyger, an Englishman in the service of the Mahrattas, but in this officer he finds his old friend the sergeant with whom he left England, and who moreover proves to be a witness to his mother's marriage. The result is, of course, that he eventually returns home to find, after all, the plotting Jesuit priest alive. He is never able to establish his legitimacy, but purchases his patrimonial estate, which is sold under mortgage, obtains legal authority to keep the name, and marries his cousin Mercy Fyfeways.

One cannot but note the similarity and sometimes parallelism of this work with "The Golden Bullets," by W. W. Ireland. The two volumes should be in every library, since there are probably no other works which give so full and clear an insight into life in India during the last century.

DOCTOR GRAY'S QUEST. By Francis H. Underwood, LL.D. Cloth; 12mo; pp. 406. Price, $1.75. Lee & Shepard, Boston.

This work will be gladly welcomed by all lovers of good books. It is not only a thoughtful and informing volume, but a work of fiction of unusual power. The character of Mercy Starkweather is admirably conceived, or, rather, observed — since it is a typical painting of New England character developed with great ingenuity and judgment; indeed, a finer piece of delineation in this line is rare in English literature. The other characters win affection or inspire reprobation according to their development.

The story of Doctor Gray and his search for proof of the innocence of Florian's father, has deep interest; and the domestic life of Little Canaan is another of those historic pictures of New England for which Mr. Underwood is famous. Altogether, the book takes first rank among modern works of fiction, and is well worthy of the reputation its learned author has already established as a delineator of old-time scenes and incidents, and of picturesque characters that are fast receding from the stage of life.

Game Birds at Home. By Theodore S. Van Dyke. Cloth; 16mo; pp. 219. Price, $1.50. Fords, Howard & Hulbert, New York.

This elegantly gotten up little volume is fluent, lucid, and sparkling, in a style calculated to fascinate not only the sportsman, but every lover of nature and outdoor life. The author portrays the skill of man, the sagacity of the dog, and the beauties of nature, along with the haunts and habits of the different species of game birds—grouse, colin, woodcock, plover, California quail, snipe, wild turkey, and the varied forms of water-fowl. Without being at all pretentious, the work covers a great deal of ground, and sustains the reader's interest throughout; it is bound in a most picturesque Nile-green cover, fitly ornamented, and is deserving of a place in every library. The graphic narratives and valuable hints that emanate from an experience of forty years are possessed of untold value, not alone to the sportsman, but to the naturalist. Further, it is doubtful if any woman who loves the woods and fields and charms of animated nature can fail to find genuine inspiration and much fresh knowledge of outdoor beauty from Mr. Van Dyke's delightful brochure.

Practical Dietetics. By W. Gilman Thompson, M.D. Cloth; 8vo; pp. 802. Price, $5.00. D. Appleton & Co., New York.

The subject to which this volume is devoted has never received full or due attention, either in text-books or at the hands of teachers; and, strange to say, even in hospitals and in schools for nurses it is practically ignored. This work, happily, in great measure rectifies these shortcomings, and furnishes the practitioner with a text-book replete with instructions as to the appropriate diet in disease and convalescence, and information regarding the influence of feeding upon physiology and pathology. Even the various methods of cooking food, and the adulteration, economic value and comparative nutritive properties of various edibles, are discussed; the feeding of pregnant women, nursing mothers, infants and young children constitutes a very important part of the work, and an appendix affords receipts for invalid foods and beverages suitable for fevers and convalescence from acute maladies.

The work is the result of careful and intelligent observation on the part of its author, and certainly occupies a field in medical literature hitherto practically untilled.

Pathology and Morbid Anatomy. By T. Henry Green, M.D. Cloth; 8vo; pp. 595. Price, $2.75. Lea Brothers & Co., Philadelphia.

This work has long been a leading text-book for Anglo-Saxon practitioners and students—a fact indicated by the number of editions demanded. A knowledge of the subjects covered by its title is essential to every medical student, whether under- or post-graduate, since an understanding of disease is a prerequisite to rational therapeutics.

This is the seventh American, from the eighth and revised English edition, and presents a number of new chapters, also some sixty new engravings. As a whole the work is one essential to every medical library, and possesses an especial advantage over works of its class in that it presents its topics in a terse manner calculated to be grasped by the memory with a minimum of labor.

Male Sexual Disorders. By Eugene Fuller, M.D. Cloth; 8vo; pp. 238. Price, $2.00. Lea Brothers & Co., Philadelphia.

This work is exceedingly *à propos*. From time immemorial the class of maladies of which it treats have been most lucrative to advertising charlatans, and it is a great satisfaction to find a work based on sound knowledge pitted against rank empirical methods. The author believes the majority of male sexual disorders more frequently arise from pathological than from neurological or mental causes, and he endeavors to place the literature of sexual pathology on a par with that of sexual neurology, and to deal with the ætiological factors in their order of real importance. The volume will prove of superlative value to the practitioner.

Senator Intrigue and Inspector Noseby. By Francis Campbell Sparhawk. Cloth; 16mo; pp. 162. Price, $1.00. Red Letter Publishing Co., Boston.

An evidence of the popularity of this work is given by the fact that it is now in its second edition. It is a plea for better treatment of the Indian at the hands of the United

States Government, and is intended to portray the evils of political patronage and of placing the affairs of the "wards of the nation" in the hands of irresponsible parties whose sole claims for office are those of the "ward heeler," the "bummer," and others of the class who make of politics a trade. The disasters which follow the execution of the political plot whereby an honest and desirable Indian agent and school teacher is dismissed to make room for the political henchman of a senator, is most interestingly told.

A German-English Medical Thesaurus. By Reverend Henry Losch, M.D. Cloth; 12mo; pp. 323. Price, $2.50. Published by the author, Philadelphia.

This is a complete compendium of single and compound medical words and terms, along with dialogues, idiomatic phrases, proverbs, etc., in both the German and English tongues, for the especial use of physicians and medical students. The result is a very convenient manual, one that is of prime necessity to every practitioner who is not familiar with the Teutonic language and who is apt to come in contact with Germans. For accurate and convenient reference there has been added a complete schedule of German declensions and irregular verbs. It is the most practical book that has been offered in recent years looking to convenience in communicating with those Germans whose knowledge of English is deficient and obscure.

Text-book of Practical Therapeutics. By Hobart A. Hare, M.D. Cloth; 8vo; pp. 800. Price, $3.75. Lea Brothers & Co., Philadelphia.

Five editions in as many years constitute a remarkable record for any book. The reason for the popularity of this particular text-book on therapeutics is doubtless to be found in the author's original and ingenious mode of conveying practical knowledge. Possessing a complete acquaintance with drugs and their remedial virtues, and having abundant clinical opportunities, Doctor Hare has made of this volume a treatise in which the properties of the materia medica are closely linked with therapeutical application.

Doctor Judas. By William R. Cobbe. Cloth; 16mo; pp. 320. Price, $1.50. S. C. Griggs & Co., Chicago.

The aim of the author is, apparently: First, to give his own experience as an opium *habitué* during a period of nine years: Second, to refute much of what appears in the confessions of De Quincy: Third, to enlighten his readers regarding opium, to point out the dangers of its indiscriminate use, and to plead for a better regulation for its sale: Finally, to give all the assurance that the unfortunate victim of the opium habit can be cured.

Report of the Department of Health of Chicago for 1894. By Arthur R. Reynolds, M.D. Paper; large 16mo; pp. 264. Published by the Department.

The title sufficiently gives the scope of this work. Of especial value are the embodied reports upon smallpox experiences in 1894, which constitute the bulk of the volume. It appears that there were no less than 2,333 cases of variola in the Windy City during the year named.

Strength. By C. A. Sampson. Paper; 16mo; pp. 240. Price, 25 cents. Rand, McNally & Co., Chicago.

The author purports to put forth a treatise on the development and use of the muscles, but the work seems chiefly devoted to puffing its author as "the strongest man on earth." While the book contains considerable matter of material interest, its value as a scientific publication is somewhat problematical.

Pocket Materia Medica and Therapeutics. By C. Henri Leonard, A.M., M.D. Cloth; 16mo; pp. 367. Price, $1.00. The Illustrated Medical Journal Company, Detroit.

This is the second edition of this work, and presents 67 pages more than the former edition. We are pleased to note also that former errors have received attention. It is very complete in its scope.

The Art of Massage. By J. H. Kellogg, M.D. Cloth; 8vo; pp. 282. Modern Medicine Publishing Co., Battle Creek, Mich.

It is claimed for this work that the author has attempted to systematize his subject. He certainly has succeeded in producing a somewhat ponderous volume, the practical utility of which may be left to the judgment of the individual reader.

Buried Alive. By Franz Hartmann, M.D. Cloth; 8vo; 147 pages. Price, 75 cents. Occult Publishing Co., Boston.

This work is an examination into the occult causes of apparent death, trance, and catalepsy, and contains detailed accounts of numerous cases in which the evidences of premature interment seem very reliable and historical.

Therapeutic Brevities.

Notes on Nuclein.—My first case was one of chronic alcoholism of many years' duration, with chronic rheumatism; an acute rheumatism came on with a temperature of 104°, and the patient seemed about to die. When comatose and unable to swallow, Nuclein injections three hours apart restored him, and he ultimately recovered. The next case was a neurasthenic woman, confined to bed for many months; Nuclein and arseniate of strychnine restored her to health. A woman of 35 had suffered from "nervous prostration" for fifteen years, insomnia being the chief symptom; under Nuclein she improved greatly but was not cured. A case of chronic catarrhal bronchitis — following *la grippe* — weak and prostrated, with severe cough, failed to improve under Nuclein. A woman who had *la grippe* followed by chronic bronchitis, general malaise and great weakness, who did not improve on opium and expectorants, got well under Nuclein, although there is still dullness over the apex of one lung. A child of six years, while convalescing from scarlet fever, "took cold;" temperature 102°; swelling of wrists and glands; some albuminuria. She was given, every four hours, Nuclein and digitalis, with the result the symptoms quickly disappeared and the urine resumed a normal specific gravity. Another case was one of suppurative tonsillitis with profound weakness, that appeared about to die; it also recovered under Nuclein. The eighth case was a boy of eight years, similarly affected, and the result was the same.— Doctor Baskett, before the Missouri Medical Association.

Ethyl Iodide.—We again desire to impress upon professional attention the great usefulness of this much neglected drug. Its extreme volatility renders its inhalation a simple matter. All that is necessary is for the patient to take the unstoppered vial in his hand, hold it to his nose or mouth, and inspire. Inhalation may be continued from two to five minutes, according to the effect produced, vertigo being the indication for its cessation. In the treatment of pulmonary and laryngeal tuberculosis, in syphilis of the air-passages, and in some cases of constitutional syphilis, it affords a ready means of local and systematic medication with iodine. It is an antiseptic of considerable power, and as such has been utilized in the treatment of acute pneumonia. In the relief of asthma, and especially of the asthma associated with hay fever, it is very often effectual; for the latter purpose it may be combined with ether or chloroform when necessary. Care should be taken to get a pure preparation. The drug should be dispensed in amber-colored bottles, with glass stoppers. When amber bottles cannot be obtained, the vial containing the drug should be wrapped in black paper. It should be kept in a cool place. The development of a brown color, showing the presence of free iodine, indicates that the preparation has become decomposed and is no longer suitable for use by inhalation.—*Philadelphia Polyclinic.*

Cocillaña.—I find the action of this drug to be of decidedly expectorant nature. The pulmonary secretion is, in all cases, much increased, and the strength of the cough likewise; even when used in health a distressing cough is often the result. Nasal secretion is likewise stimulated and sneezing often induced. In a few cases I have observed headache, which on some occasions amounts to little more than a fullness, and this I regard as rather a drawback to the use of the drug for any length of time; nevertheless the pain is not severe and may be easily relieved by other means. The slightly laxative action of Cocillana is very much in its favor and may greatly increase its value, since other expectorants do not have this property—at least not so well marked. The pulmonary secretion is stimulated to such an extent that I am exceedingly careful about giving in capillary bronchitis and pneumonia, but in all cases where secretion is defective and the cough hard and dry it acts much better than any known drug of the expectorant class. I have given it with great benefit in the laryngitis of both children and adults, and have thus far failed to observe any depressing action upon the heart. On the whole I consider Cocillana an expectorant of the greatest value, and particularly successful in its own more direct sphere. — David Crichton, L.R.C.P. (Edin.), Walthamstow, Essex, England.

Anæsthetization Accidents. — The accidents to be avoided with chloroform are primary (or laryngo-reflex) and secondary (or bulbar) cardiac syncope. Atropine and morphine may be employed to prevent the first, and by so doing the inhibitory action of the pneumogastric nerve upon the heart is diminished. Sparteine sulphate, hypodermatically, along with morphine, before administering chloroform, regulates the heart and diminishes the excitability of the pneumogastric. Half a

grain of sparteine produces in rabbits rapid and profound anæsthesia; in an animal under the influence of sparteine, arrest of respiration caused by the contact of chloroform with the nasal mucous membrane may take place, it is true, but the heart rapidly regains its normal rhythm; diminished excitability of the pneumogastric is to be observed experimentally. In the dog arterial pressure is kept up in the midst of the most profound narcosis. Inject half a grain or more of sparteine, together with an eighth of a grain of morphine, fifteen minutes before giving chloroform, and even in persons affected with heart disease or subjected to a prolonged operation the heart will usually remain steady. As regards primary syncope, the part played by sparteine is of small consequence; it is a tonic and regulator of the heart, acting rather against secondary syncope; morphine, on the contrary, diminishes the danger of primary syncope.—*Journal des Practiciens.*

Shepherd's Purse and Uric Acid.—I have seen several cases corroborative of the medicinal virtue of *Capsella bursa-pastoris.* For one gentleman, aged 57, who, in addition to other dyspeptic symptoms, had occasionally large discharges of coarse uric acid, coming away in masses the size of a good big pinhead, but, curiously enough, without pain, I prescribed this medicament, with charming results. Nearly a year later he informed me the uric acid had reappeared several times, but that a few doses of the Capsella soon stopped it. A lady, 80 years of age, suffered from calculus in the left ureter, which I knew to be of uric acid, as she had previously passed much "sand." It was not until I gave Capsella that a great discharge of coarse, brick-colored sand took place, with speedy relief to her pains; at the same time she drank copiously of distilled water, which sometimes has a powerful disintegrating effect on uric acid. The ancient use of this drug as a hæmostatic has been confirmed in modern times, and in my own experience.—Doctor Dudgeon, in *Homœopathic News.*

Taka-Diastase versus Malt Extract.—The new Japanese discovery is able to convert at least one hundred times its weight of dry starch under proper tests. It is absolutely permanent; is concentrated in form, requiring doses of not more than five grains, and, being an isolated ferment, is free from sugar. Thus Taka-Diastase is economical owing to small dosage, and withal it is perfectly soluble and compatible with other medicaments in neutral or but slightly alkaline media.

Per contra, the best of malt extracts will not convert more than five times their weight of starch under the same conditions prescribed for Taka Diastase; they deteriorate with age, losing diastatic potency, eventually becoming unsightly and unpalatable; they contain a preponderance of foreign inert matters, retarding activity; the dose is objectionably large; they are heavily laden with saccharine matters; owing to viscosity are difficult to handle or to incorporate with other medicaments; and their large dosage renders them expensive, while overloading the stomach.—*Fort Wayne Medical Magazine.*

Calcium Chloride as a Hæmostatic.—Since Wright demonstrated that Calcium Chloride increases the coagulability of the blood, this drug has been used in the treatment of aneurysm, in efforts to check the hæmoptysis of pulmonary tuberculosis, in the hæmatemesis of gastric ulcer, effusions of purpura and scurvy, and the bleeding of hæmophilia. It must not be forgotten that while the first effect is to increase coagulability, the long-continued use of the drug tends rather to diminish coagulability; it is best, therefore, to give a large quantity in the beginning, say from ten to thirty grains at a time, the smaller dose repeated as often as every two hours, the larger not oftener than three times daily—and then to gradually diminish, intermitting at the end of two or three days. In acute cases there may be no occasion to resume, but in long-continued treatment, such as that of aneurysm, it might be well to give for two or three days in each week; clinical experience will be necessary to determine this point.—*Philadelphia Polyclinic.*

Hepatic Colic.—Salicylate of sodium is a cholagogue which produces an abundant biliary flux; in many painful cases, where the kidneys are sound, good results may be obtained from this agent. The same may be said of chloroform and ether, both of which can give by reflex action a considerable increase in the biliary secretion. Calomel, so frequently employed as a purgative in hepatic colic, deserves special mention; this salt not only acts in an indirect way on the liver in provoking an increased secretion, but also as a direct stimulant on the hepatic cell. Mercury salts—more, perhaps, than any of the other metallic salts—are arrested in the liver, producing by accumulation the stimulating action which gives to calomel the properties of a cholagogue so universally admitted.—*Wiener Medicinische Wochenschrift.*

Oil of Cajeput in Pneumonia.—Cajeput has been known as a good diffusible stimulant and sudorific for more than two centuries, and it long enjoyed reputation as a remedy for epilepsy. In 1861 M. Delvaux recommended Cajeput for chronic affections of the respiratory organs, claiming that it led "to diminution of the dyspnœa and cough, and an easier expectoration." During the recent epidemic of influenza in Dublin, Doctor George Foy used Cajeput oil as a diffusible stimulant in asthenic pneumonia, for which he thinks it particularly suited. It is as quick and powerful a cardiac stimulant as alcohol or ether, and, like them, relieves the heart by dilating the systemic arterioles; but, unlike either, it does not diminish sensitiveness of the respiratory centres. He prescribes six-drop doses in mucilage, repeated at short intervals; and sometimes adds quinine and tincture of nux vomica.—*Medical Press and Circular.*

Nuclein in Diphtheria.—At a meeting of the Society for Medical Progress of the New York West Side German Dispensary, held April 14th, Doctor William Jacobson read a paper on the use of Nuclein in the treatment of diphtheria and other contagious diseases. For the introduction of this agent, he said, the profession is indebted to Doctor Victor Vaughan. Out of 200 cases of diphtheria, scarlet fever, and measles, he claimed there had been only nine deaths, and in these the fatal result was due either to the fact the Nuclein injections were not made until the disease was too far advanced for any remedy to be of service, to necessarily fatal complications, or to lack of proper care or other unfavorable conditions.—*Medical and Surgical Journal.*

Onions in Therapeutics.—Doctor Stawski experimented for several days upon eight healthy persons in order to determine the effect of onions. About two ounces of the raw esculent were administered each day, along with mixed diet. The result gave no support to the claim that onions promote either diuresis or diaphoresis. In five of the eight cases there was increased body-weight. Appetite, thirst, eructation, peristalsis, and bodily vigor were augmented, the latter however followed by a temporary inclination to somnolence. In general the fæces were made more soft, increased in quantity, and more easily evacuated.—*Medical Standard.*

Resuscitation of the Still-born.—During the past three or four years, in several cases of this kind, apparently under the most hopeless circumstances, when all other standard methods had failed, I have resorted to hypodermatic injections of whiskey, with most satisfactory results. The amount used is five or six drops in first one arm and then the other, fifteen drops being the largest quantity used in a single case. If the mother has suffered alarming ante-partum hæmorrhage, and the infant has been drained of blood before its birth, this method can avail nothing.—Doctor Bedford Brown, in *American Journal of the Medical Sciences.*

Diphtheria.—Abundance of sunshine, the greatest of all purifying agents and germicides, good hygienic surroundings—absolute cleanliness indoors and out, internal and external—are axioms, so to speak, which should form the basis of treatment in all cases. When the disease has appeared in any locality the whole population should be informed at the earliest possible moment, so that suitable precautionary steps may be taken to suppress the outbreak. The mouths and throats of all children under fifteen years of age in the infected district should be carefully examined from day to day.—Doctor De Courcy, in *Courier of Medicine.*

Potassium Bichromate.—This drug has a specific effect upon catarrh of the bronchi, both acute and chronic, and will be found of great benefit in catarrhal conditions of any of the mucous membranes. In gastric catarrh it acts admirably, especially if tenderness on pressure over the epigastrium is a marked symptom. In chronic gastric ulcer great confidence may be placed in it; a very small dose, from one-sixteenth to one-twelfth of a grain, given upon an empty stomach, will answer the purpose. This agent will well repay careful investigation, and is without doubt a most useful remedy.—*Eclectic Medical Journal.*

Helonias for Pruritus Vulvæ.—Doctor I. L. Danforth reports a case that suffered for weeks with intense pruritus, both vulvar and vaginal; the labia and skin adjoining were red and swollen, as was also the vaginal mucous membrane which in addition was covered with thin, white, curdy deposits; also pouring from a congested cervix was a thin, albuminous leucorrhœa, which was unquestionably the cause of the pruritus. The itching was intolerable. The woman was relieved speedily on the administration of Helonias.—*North American Journal of Homœopathy.*

Abdominal Distention.—A large number of women complain of abdominal distention—"bloating," as they call it; many cannot breathe freely on account of this distress. Constipation is a usual accompaniment.

For the relief of this condition Doctor Bloom gives a pill containing two grains each of beechwood creosote and purified ox-gall, one grain pancreatin, one-third grain extract nux vomica, and one grain phenyl salicylate; one pill after each meal. If this does not correct the constipation, add one-half to one grain extract colocynth compound.—*Philadelphia Polyclinic.*

"*Chelsea Pensioner.*"—Anson paid £300 for the privilege of publishing the following prescription for chronic rheumatic arthritis:

Sulphur, 1 ounce.
Cream of tartar, 1 ounce.
Rhubarb, 4 drachms.
Gum guaiac, 1 drachm.
Make one powder, and add honey 16 ounces.

Mix well. Take two tablespoonfuls in a tumbler of white wine and hot water on going to bed, and repeat the dose on getting up in the morning.

—*Louisville Medical Monthly.*

Neuralgia.—Hunsberger claims Aconite or Aconitine to be the remedy *par excellence* in this affection. Its action depends upon the physiological fact that it diminishes reflex activity by paralysis of both motor and sensory nerves, commencing at their peripheral endings, and that this action is most marked in the sensory nerve-endings. There is not another drug with which this action can be produced on the sensory nerve-endings without pushing it to the danger point.—*Kansas Medical Journal.*

Ergot in Tabes Dorsalis.—In conversation with Charcot the subject of remedies in locomotor ataxia was under consideration; in a general *résumé* relative to the unsatisfactory results of the usual measures, the Doctor, in a moment of enthusiasm, made the remark that the most satisfactory results are obtained from the internal use of Ergot because in its action upon the healthy nervous mechanism it has the most pronounced affinity for the sensory fibres.—Doctor Halbert, in *The Clinique.*

Chloroform Asphyxia.—At the Göttingen clinic, the operator, standing to the left and facing the patient, places the ball of the thumb of the opened right hand upon the patient's chest, between the place of the apex beat and the sternum. He then repeatedly presses in the thoracic wall with a quick, strong movement, at the rate of about one hundred times per minute. The results by this method have been very satisfactory.—*Internationale Klinische Rundshau.*

Removal of Tattoo Marks.—After asepsis of region the tattoo is remade with a solution of thirty parts of Zinc chloride in forty parts of sterilized water; with due precautions no great inflammatory reaction takes place. After a few days a crust forms, which falls off from the fifth to the tenth day.—Doctor Brault, in *Annales de Dermatologie.*

Passion Flower as a Sedative.—For great nervous excitement and restlessness give *Passiflora incarnata* every three hours. After the second dose, if there is no evidence of sleep, double the quantity and shorten the intervals by half, thereby securing the desired effect.—Doctor Merson, in *Homœopathic News.*

For Seminal Emissions.—Hyoscine has not proved successful in my hands, but I have attained perfect results by the administration of *Thuja occidentalis* (fluid extract) in six- to eight-drop doses, thrice daily, half an hour before each meal.—Doctor De Witt, in *Cincinnati Lancet-Clinic.*

To Re-establish Lochia.—Give ten drops fluid extract Jaborandi every three hours. At the same time apply fomentations as warm as can be borne pleasantly, and if necessary bring the patient under the influence of ipecac and opium.—Doctor Littlepage, in *Medical World.*

Meningitis.—The appearance of herpes on the lips during acute meningitis is a sign that the disease is non-tuberculous, but must not be regarded as inevitably indicative of recovery, as is the case in pneumonia and some other affections.—*Cincinnati Lancet-Clinic.*

Propylamine in Chorea.—This almost-forgotten drug is now being employed—and successfully, it is said—in the treatment of chorea; it is given in peppermint-water.

Furuncles.—In the treatment of boils coming in crops, Colchicum is recommended in doses of from one-half to one-third of a grain each day.—*Dominion Medical Monthly.*

Medical Progress.

Action of Morphine on Intestinal Peristalsis.—Among the first manifestations of the action of morphine after a hypodermatic injection, are the effects produced on the intestine, resulting in one or two stools ere the phase of narcotism sets in (Picard). I have carefully observed these defæcations, and noted that, as with the vomitings, they are not regular as to frequency, intensity, or duration; they do form, however, a habitual symptom which apparently is equally related to the dose and the rapidity of absorption, and they follow more surely as the result of administering small doses. That these defæcations are due to a reawakening of intestinal peristalsis by the morphine, cannot be doubted, despite the assertion made by certain authors that morphine produces immediate suspension of the activity of the digestive viscera.—It is easy to demonstrate the truth by registering (as I have done), with the aid of the conjugated ampulla, the movements of the intestine. To me it appears beyond doubt that in the dog morphine first excites intestinal movements; but it is not less certain that as the result of this first action the inverse effect ensues, and that from the outset of the soporific phase these movements disappear and give place to the most complete inertia, which, joined to the suppression of the secretions, explains the constipating effects of opium and morphine. This is confirmed by several authors.

Nothnagel and Rossbach may be numbered among those who concede that before paralyzing the nerves of the intestine, morphine begins by exciting them as it does all the other nerves. Injecting twenty-five milligrammes of the medicament into the veins of a rabbit, Hasse and Gscheildlen observed that the movements became more rapid and intestinal excitability was exalted—the same as was observed in the dog. The human subject also exhibits the original exciting action on the intestine, then rapidly the secondary depressing action. It is freely admitted that if the entire dose of morphine be given at once, the paralyzing action is immediate.

The mechanism of this action is perhaps more complex than that of the nauseating and hypersecretory action of the same drug. I have good reasons for believing that the central phenomena are not dominant, and that the sympathetic ganglionic centres situated at the periphery participate, in very great measure, in the production of the intestinal phenomena. The transient exaggeration of peristalsis is certainly analogous to that produced with greater intensity and duration by apocodeine,* the hypnotic effects of which, even in man, are preceded by constant intestinal symptoms; by chloral, whose anæsthetic sleep is always announced by noisy rumbling of the bowels; by amorphous apomorphine, etc. All these pharmaco-dynamic actions bear intimate relations which it would be wrong to neglect, for they possess interest from various points of view.

The effects of this medicament on the intestinal functions of species other than the dog are identical with those just described—the dominant action in the horse, ox, pig, sheep and cat is intestinal inertia; and this fact, added to other experimental data in my possession, causes me to believe wholly in an action exerted by morphine on the motor peripheric elements of the abdominal viscera.

The majority of nervines stimulate before paralyzing; so, it must be definitively admitted, does morphine (in small doses) first excite the motor nervous centres of the unstriped muscular fibres before narcotizing them.

The application of these observations may be found in the employment of morphine, as proposed by Kuppffer, in the treatment of insufficiency of uterine contractions. This author claims to have observed repeatedly that morphine, given in small doses, augments the tonicity of the muscles and stimulates the contractions of the uterus. Such a result would be in perfect harmony with the facts which I have just stated, and with their physiological interpretation. — Doctor L. Guinard, in *Lyon Médical.*

Digestion of Starchy Foods.—Notwithstanding the fact that starch is the most widely distributed and abundant of nutrients, and necessary to both animals and plants, it is strange that neither can assimilate it until it has undergone hydrolysis. This splitting-up of the starch by combining it with water is due almost entirely in plants, and wholly in animals, to the action of a diastase. In man there exists the further peculiarity, probably acquired, that his diastasic fluids will not act on the starch unless it has been cooked; when ingested in this condition the starchy foods are, during the process of mastication, brought into contact with the salivary diastase called *ptyalin*, and this commences their conversion into dextrin and maltose. In the stomach this diastase con-

*L. Guinard: "Contribution to the Physiological Study of Apocodeine," *Bulletin de la Société de Biologie*, and *Lyon Médical*, 1893.

tinues to act until the gradually augmenting acidity, due to the gastric fluid, renders it inert. After passing through the stomach the original alkaline condition of the food is restored and the conversion of the amylaceous food is completed by the diastase secreted by the pancreas, and the soluble products are assimilated.

I would here take occasion to emphasize the statement that we do not pay sufficient heed to the part played by amylaceous foods in that all-prevailing scourge, dyspepsia. Few realize that nearly two-thirds of our food consists of starches; yet such is the case, and with some races and among certain classes the proportion is even greater. Among ordinary foods we may select as examples the following: potatoes contain 20 per cent. of starch, beans 33 per cent., peas 37 per cent., oats 68 per cent., rice 88 per cent., and flour is practically all starch. Are we then unreasonable in saying that we probably overlook the greater source of digestive troubles in the starchy foods, in our efforts to assure the disintegration of the fats and proteids?

Instead of pepsin preparations, would it not be better to have a diastase pure and simple—one which occupies a small space; which will retain its activity in any climate; which is concentrated enough to cause a moderate dose to aid materially in the digestion of the bread, cakes and pastry which modern culinary development usually presents to us in such a gummy, glutinous or compacted mass, or so permeated by grease, that the action of the diastasic fluids is greatly retarded? Furthermore, such a diastase would free us from the trouble and expense of handling bottles of fluid, and would enable us to place such a desirable anti-dyspeptic in the hands of the suffering thousands of tropical and semi-tropical climates, where the malt extract deteriorates so rapidly as to practically prohibit its employment.

Can such a compound be prepared? The history of pepsin is sufficient answer; such a substance, possessing a proteolytic power of 1 to 10,000, was beyond the dreams of the most sanguine fifteen years ago. Diastase has been prepared in an experimental way, one part of which would dissolve 50,000 parts of starch. We do not hope for such a product on a practical scale as yet, but we may expect in the near future a diastase which will convert one hundred times its weight of starch.—Professor J. M. Francis, in *Bulletin of Pharmacy.*

* *
*

Since the publication of the above, Messrs. Parke, Davis & Co. have succeeded in producing on a practical scale "diastase which will convert one hundred times its weight of starch" in *ten minutes*, under proper conditions. It is claimed that certain diastasic products on the market, principally of animal origin, have a converting power varying from 100 to 500—*when allowed to act from three to four hours;* Taka Diastase under similar conditions will convert over *one thousand times* its weight of starch.—*Pharmacal Notes.*

Snake-Poison Antidotes.—The chemists of the laboratory attached to the office of the Sanitary Commissioner with the Government of India have concluded a series of experiments with snake venom. Several remedies investigated have been regarded more or less as antidotes, notably strychnine, "periodate crystals," and gold chloride; but results are not even favorable to the first of these, although it has attained to the reputation of being reliable. Strychnine has been demonstrated to be quite useless to prevent the paralysis of the lungs and other symptoms which follow on the bite of the cobra, while it has been found to have "no effect whatever in preventing the occurrence of death even after minimal lethal doses of cobra venom have entered the system." So that it is probable that in cases which have been believed to be cured by strychnine injections the smallest fatal dose of the poison may not have entered the system of the patient. "Periodate crystals" have been vouched for by investigators in South America as an antidote to the indigenous *thanatophidia*, but the Surgeon-General reports that the saturated solution was useless as a means of destroying cobra venom even when employed as a vehicle for its injection into fowls and monkeys. Attenuated solutions of chloride of gold, however, on the other hand, when mingled with the venom previous to injection, render it inert; similarly, permanganate of potash destroys the virus when mixed with it; but such remedies have no efficacy when injected into the human system after the entrance of the venom. It will thus be evident that we still await the discovery of a specific to neutralize the poison of the most deadly snake of India.—*British and Colonial Druggist.*

Diarrhœa and Earth-Temperatures.—The close relationship between rise of diarrhœal mortality and rise of earth temperature is strikingly shown by Doctor Priestley in his report for the past year for

the borough of Leicester, England. He studied very carefully the death-roll in those weeks wherein the temperature at four feet below the surface reached or exceeded 56° F., with the view of ascertaining whether the height of the thermometer had any causal relationship with the disease. By a comparison of data at one and another portion of the year he has found fresh *prima facie* evidence that a very close relationship of the sort in question does exist. Thus, allowing a period of fourteen days to elapse between the date of attack and death, seven days for average duration of fatal cases, and seven days for notification from the registrar of deaths, Doctor Priestley shows that, the four-foot thermometer having reached and passed 56° F. on July 2d, the deaths began to rise considerably a fortnight later, and continued high so long as the thermometer registered above that temperature, but that immediately the thermometer dropped below the figure the deaths from diarrhœa fell, and continued to fall until the disease ceased to appear in the death records. The data included 153 deaths in all, and the coincidence, if only such, of high temperature and high death-roll, and low temperature and falling death numbers, is of a character so striking as to attract attention. Doctor Priestley hopes to obtain, by a set of questions put in each fatal case, facts that will in a term of years enable some fresh light to be thrown on the ætiology of the disease. Meanwhile he has for 1894, as regards Leicester, obtained facts which go to augment the growing evidence as to increase of diarrhœa and ground temperatures being in the position of effect following cause.—*British Medical Journal.*

Nuclein.—It is claimed, and we think with reason, that Nuclein, which is a secretion or a product of the white blood-corpuscles, is naturally a protection against disease. It is claimed that by the presence of this substance in blood and in its secretions, decompositions are prevented, and that in the complicated processes of digestion it plays a rôle not only important but indispensable. It is not confined in its action to the blood-cells, but exerts a powerful stimulant action upon the organized cells of the tissues as well. Its power to stimulate the brain and nerve-centres seems to be well demonstrated, and its use, if such is its physiological action, is indicated in cases where, as in chronic diseases, the tone of the system is essentially lowered, and especially when persons are suffering from impairments incident to age.

Professor Vaughan has been accustomed to prepare Nuclein from brewer's yeast. It may also be prepared from animal sources—by artificial digestion—in ways which have been fully described. Its use is strongly recommended in the treatment of diphtheria, and better results are claimed for it than had been attained with the serum treatment. Of the preparation used in these experiments it is advised to inject twenty minims in the gluteal region of the child, and in adults twenty to thirty minims, according to age, in the back or upper portions of the chest. The Nuclein is absorbed in a few moments. Three injections are advised in ordinary cases. The pain is less and less severe, and deep injections are better borne than those that are subcutaneous. No ill effects have thus far been discovered from its use.—*Omaha Clinic.*

Fallacy of Milk.—The popular idea that milk is one of the most wholesome and nutritious articles of food for use at all periods of life, is by many facts shown to be an error. Cow's milk is admirably adapted for digestion in the stomach of a calf. The bovine stomach is so constructed that it can deal with food in lumps or small masses, on account of the ruminating habits of the animal; and it is doubtless for this reason that cow's milk is so constituted that, in the stomach, when brought in contact with the acids and curd-forming ferments of the gastric juice, it forms large, hard, tough curds. Woman's milk, on the other hand, forms small, soft curds. This is the chief reason why cow's milk disagrees with infants, as it almost universally does, when given in an undiluted state. Rondot and Lépine have recently called attention to the fact that milk is not, in its constitution, well adapted to the sustenance of adults—at least, it is not a complete food; it contains too large a proportion of albuminoids in relation to the hydrocarbons. Great numbers of persons are the victims of migraine, bilious or sick headache, dullness of mind, depression of spirits, constipation, and a variety of allied and associated symptoms, in consequence of the free use of milk. The common habit of drinking milk is particularly injurious, as a large quantity of milk entering the stomach suddenly and in an undiluted state favors the formation of very large and hard curds.— *The Eclectic Magazine.*

Contents of Healthy Stomach.—Free hydrochloric acid is secreted immediately the food enters; but this combines with proteid, so that salivary action is not impeded during

the first stage. The free acid does not appear in the stomach contents till from half an hour to two or three hours after the meal is taken —the time varies according to the composition of the meal. Hydrochloric acid combined with proteid is less antiseptic than the free acid. The inorganic salts, especially the chlorides, and the total percentage of proteids in solution, fall during the progress of digestion; albumen increases, albumoses remain stationary, and peptone diminishes. Physiological text-books are in error concerning the amount of acid. The total acidity is from 0.108 to 0.36 per cent.; combined acidity, from 0.072 to 0.324 per cent.; free acidity, 0.018 to 0.09 per cent. The causes of variation are, the time after the ingestion of a meal, and the character of the food taken. The free hydrochloric acid is seldom over 0.09 per cent. after a proteid meal, but it may rise to 0.162 or 0.27 after a meal composed chiefly of carbohydrates.—*Journal of the Chemical Society*, Edinburgh.

Observations on Leprosy.—According to Doctor Schierbeck, of Reykjavic, in 1889 there were only about thirty lepers in Iceland. The four leper lazarettos had long since been discontinued, and no isolation had been in force, lepers only being forbidden to marry. That leprosy should gradually disappear where isolation was not observed but marriage was prohibited, seemed to favor the idea that the malady might be hereditary but not contagious; but this has proved to be erroneous. In 1894 Doctor Ehlers was sent to Iceland by the Danish Government to investigate the condition of leprosy and found not less than 141 cases on the island, which shows there are distinct foci from which the disease is rapidly spreading; there are several cases of leprosy of undoubted contagious origin. In Norway leprosy is gradually diminishing; there were about 3,000 lepers in 1856, and only between 800 and 900 at the end of 1892.—Doctor E. Kaurin, in *Norsk Magazin for Lægevidenskaben.*

The Brain in Epilepsy.—Harold Holm found, by microscopical examination of the brains of three epileptic patients, degenerative processes in the cortical substance, extending to the psycho-motor centres, and even to the medulla oblongata and the spinal cord. He endeavored to produce similar changes in the brains of young rabbits, with an ordinary percussion hammer, on the skull, somewhat in front of the ears. After each percussion, as is known, epileptic fits occur, continuing for some time, and if daily treated in this way the animal dies in about ten days. A microscopic examination of the brain shows less visible degeneration in the cortical substance than in the portio medullaris, the whole brain, with the exception of the occipital and temporal lobes, being involved. The connecting fibres from the brain to the medulla oblongata and the corpora restiformi are also attacked by the degeneration.—*The Universal Medical Journal.*

The Germ Theory.—Galliard relates a case under his care in which a large suppurating cyst of the liver was opened and drained. The pus, examined microscopically, was found to contain hooklets and pneumococci, without any other microbe. The patient was not then suffering, nor had he ever suffered. from pneumonia.—*British Medical Journal.*

We always have supposed the germ theorists believed that suppuration could only take place under the influence of the staphylococcus *pyogenus* or special pus-producing germ. Here we have a germ existing in a suppurating cyst of the liver, which has no relation to suppuration in the general sense, inasmuch as resolution may take place in pneumonia without suppuration. Does this not illustrate our position in relation to germs, that they exist only because favorable media are developed ?—*Times and Register.*

Carotid Aneurysm.—Two cases of aneurysm, at the root of the neck, both right-sided, presumably carotid, came under the notice of Doctor S. Solis-Cohen. Treatment consisted in rest and the administration of sixty grains daily of hydrated Chloride of Calcium. Marked improvement occurred in one case—the same as was observed in a case of innominate aneurysm that came under the Doctor's care two years ago. In the other case no change has yet been noticed.—*Philadelphia Polyclinic.*

Vaginal Casts.—A woman who was in the habit of applying the "Orange Blossom Treatment," which consists in introducing a cylinder, the action of which is to produce an exfoliation of the epithelium of the vaginal mucosa, shed complete vaginal casts fifty or sixty times, after as many applications. The casts exhibited the rugæ and apices of the papillæ, in fact all the structures of the vaginal mucous membrane.—*Medical Week.*

The Medical Age.

VOL. XIII. DETROIT, OCTOBER 10th, 1895. No. 19.

Original Articles.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.*

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S. ARMY.

(*Continued from page 554.*)

IV. THE FRENCH ARMY.

A study of the military history of the French—a people who loved war, and who, in the words of the great Sully, "had pursued no other trade than that of arms"—affords the most satisfactory results in determining the evolution of Military Sanitation.

Since the days of Paré, "The Father of Modern Surgery," whose services were so universally recognized, and whose opinion was so highly valued by the Army that it was sought even upon purely military questions, military sanitation has advanced, by halting steps indeed, until to-day it has become the most specialized of the many specialties in our profession.

In 1591, at the siege of Rouen, field hospitals to follow the movements of armies first appeared in France. The Hotel des Invalides, for worn-out and disabled soldiers, was founded in 1659. In 1630 medical officers were first given a distinctive military title. In 1708 a royal edict created a permanent service of medical and surgical inspectors-general and majors to accompany the Army—this corps numbered two hundred officers, and its organization has continued from that day. In 1718 schools for army and navy medical officers were founded. In 1747 Fontanieux promulgated a code of regulations for the government of military hospitals—the foundation of sanitary regulations obtaining to-day; he reorganized hospitals for the training of medical officers, and instituted sanitary councils. In 1761 De Chamousset inaugurated competitive examinations for appointment as medical officer, and established a central pharmacy. In 1780 *The Journal of Military Medicine and Surgery* was founded.

With continued peace the French military sanitary service retrograded, and in 1788 the medical corps numbered scarcely 170 officers; this is the common history of every military organization. No truer words were ever written than those of the rhyming soldier of Delhi:

> "When war is rife and danger nigh,
> 'God and the Soldier!' is the People's cry;
> When peace is made and all things righted,
> God's forgot, and the Soldier slighted."

And particularly are they true of the Medical Service: In all grades of society we find a disposition to ignore the value of medical men, until sickness or accident compels an appreciation of their value. If this be true in civil life, how much more so is it in the army, in times of peace, when no heed is ever given to the warning from military sanitarians to "prepare for war."

But to return to France. The Revolution broke out and was followed by the Consulate and the Empire, a period of unceasing demands upon the sanitary service—the period of Percy, Larrey, and Desgenettes. Thanks to the activity, knowledge and genius of these men, the work was crowned with a success previously unknown. Percy and Larrey disputed the honor of having perfected the field hospital and ambulance wagon. Larrey, pressed by the necessities of the situation, devised the "Cacolet," by means of which the sick were carried on the backs of mules and camels. At Jaffa, pestilence decimated the army; Desgenettes conquered it. In the marvellous campaigns of Napoleon, in which

*Read before the Association of Military Surgeons.

he moved huge masses of men from one end of Europe to the other, his efforts were greatly assisted by Percy and Larrey. What they accomplished at that time in creating and training a sanitary corps from disunited and heterogeneous elements — a corps the like of which had never existed in any army before, and of which, indeed, Napoleon himself had never thought—seems to-day to be the crowning glory of that heroic age. But the full fruition was not yet—indeed, is not yet. The strange notion that the brain capable of originating such an organization could not command it, obtained then, and obtains to-day; it is the irrepressible conflict in every service. The Medical Officer *recommends*, the General *commands*, and an officer of direction, intendance, or what not, *executes*.

October 19th, 1841, an ordinance was enacted giving medical officers rank in the Army, but without authority; even in their own corps they remained under the control of the Bureau of Direction, through which alone they could communicate with the military authorities. By a decree of May 3d, 1848, the Medical Corps obtained autonomy, and assimilation in organization to other staff corps of the French Army; but in 1852 this decree was declared revolutionary. Vainly had the medical officer demanded reform; and then came the sad lesson of the Crimea. Always the same story—it is written in the history of every nation, in ours in deeper red perhaps than in others'; and the pity is, this same lesson requires to be learned over and over again. The decree of June 18th, 1860, gave the medical officer rank, assimilating to that of other officers. The lessons of the Crimea, of the Italian War, of the overwhelming disaster of 1870; the devotion of medical officers in Africa and in Mexico—all were necessary to destroy prejudice against and prove the value of autonomy for the Medical Department. To-day, in spite of all opposition, the cause, in France at least, has been gained.

Let us still further consider the lesson taught by this nation, by a glance at its perfected sanitary organization, the merest outline of which, it is believed, will convince the most incredulous that military sanitation is, as has been heretofore stated, the most specialized of all the specialties of our profession.

The Medical Corps of the French Army (*Corps de Sante Militaire*)* consists of both medical and apothecary officers, graded as follows: Medical Director-General; Medical Inspectors; Principal Medical Officer of the first and second class; Surgeons-Major of the first and second class; Assistant Surgeons; Principal Apothecaries, first and second class; Apothecaries-Major of the first and second class; Assistant Apothecaries-Major, first and second class. These grades, among both medical and apothecary officers, correspond to the grades of the military hierarchy, and the persons holding them have the standing of officers. The correspondence of the grades of the military and medico-military hierarchies runs from Medical Director-General, who ranks with a General of Division, down to the Assistant Surgeon-Major or Assistant Apothecary-Major with the rank of Second Lieutenant.

The total strength of the corps, according to the budget of 1892, is 1400, distributed as follows: One medical director-general, nine medical inspectors, forty principal medical officers (first class), forty-five principal medical officers (second class), 296 surgeons-major (first class), 456 surgeons-major (second class), 393 assistant surgeons-major (first class), seventeen assistant surgeons-major (second class),—total, 1257; one inspecting apothecary, four principal apothecaries (first class), five principal apothecaries (second class), forty-three apothecaries-major (first class), fifty-eight apothecaries-major (second class), thirty-eight assistant apothecaries-major (first class), four assistant apothecaries-major (second class),—total, 143.

The *personnel* of the *Corps de Sante* is distributed as follows: 454 medical and apothecary officers in the "Directions" and Hospitals,† sixty medical and apothecary officers detached on various services, 876 medical officers of all grades assigned to regi-

---

*For these details of organization the compiler is indebted to the Military Information Division of the Adjutant General's Office, U. S. Army.

†The Military Government of Paris and the Army Corps have each a medical inspector or principal medical officer (first class) as director of the sanitary service. The three divisions of the Nineteenth Corps in Algiers have each a medical director; also the Brigade of Occupation in Tunis.

ments, battalions, etc., six medical and apothecary officers in the *Gendarmerie* and the *Garde Republicaine*, four medical officers with Fire Brigade,—total, 1400.

A regiment of infantry, three battalions of four companies each, has generally one surgeon-major (first class), one surgeon-major (second class), and one assistant surgeon-major (first class). The eighteen *regional* regiments of infantry have, however, no surgeon-major of the first class. Each separate battalion of infantry has one surgeon-major (second class) and one assistant surgeon-major (first class). Cavalry regiments have no surgeon-major of the first class. Regiments of artillery, and pontonniers, have the same number of medical officers as infantry regiments, but separate battalions of artillery have no surgeon-major of the first class. Engineer regiments have each one surgeon-major and one assistant surgeon-major, both of the first class. Each squadron of the train has one assistant surgeon-major of the first class.

The *Annuaire* of the French Army for 1893 shows some changes in the totals and figures just given, as follows: One medical director-general, nine medical inspectors, forty principal medical officers (first class), forty-five principal medical officers (second class), 313 surgeons-major (first class), 479 surgeons-major (second class), 296 assistant surgeons-major (first class), 118 assistant surgeons-major (second class),—total, 1301. Total number of apothecary officers of all grades, 115. Aggregate for 1893 of the *Corps de Sante*, 1416.*

The sick of the different regiments and separate battalions are cared for in regimental infirmaries, or in quarters, according to circumstances, and by the regimental medical officers, who attend not only the officers and soldiers of the regiment, but also their families. Cases requiring hospital treatment are sent to the hospitals.

There are thirty-five military hospitals in France, and a large number in Algeria and Tunis. Hospitals are divided into five classes: First class, 600 or more beds: second, 400 to 599 beds; third, 300 to 399 beds; fourth, 200 to 299 beds; fifth, less than 200 beds. There are also among the military four "thermal" hospitals, where men can be treated with mineral waters.

In localities where military hospitals do not exist, or where they are insufficient, civil hospitals are required to receive and treat soldiers when sent by military authorities; to this end civil hospitals are divided into two categories: Mixed or militarized hospitals (*hospices mixtes ou militarisés*), and civil hospitals properly so called (*hospices civils proprement dits*). In the first category are classed civil hospitals having wards specially told off to military patients, and whenever a garrison numbers 300 men the military patients are to be treated in such special wards and to be under military hospital regulations. In the second category are classed town hospitals, where the garrison is below 300 men, in which military patients will ordinarily be placed in the regular wards if special wards are not obtainable. In a garrison of 1000 men the treatment of the sick will be attended to by military medical officers; with a garrison of less number, duty in the military wards is performed by civil surgeons where the military *personnel* is insufficient. In civil hospitals properly so called, military patients are treated by civilian surgeons, and the State pays all expenditures incurred in its behalf; there is also a regular appropriation made each year for the remuneration of the attending civilian surgeons.

The *personnel* of the military establishments comprises, in numbers fixed by the regulations: Medical officers; officers of the hospital administration; hospital orderlies (*infirmiers*); chaplains; Sisters of Charity (*Soeurs Hospotalières*). There is a chief medical officer to each military hospital, and such number of other medical officers as may be required as assistants.

The officers of the Hospital Administration are a branch of the Intendance, and, under the chief medical officers, administer the military hospital service, have command of the sections of *infirmiers*, and of the detachments of *infirmiers* in the different hospitals. In 1892 they numbered: fourteen principal officers of administration; fifty-six officers of administration, first class; fifty-six officers

* Apparently they are increasing the number of medical and diminishing the number of apothecary officers.

of administration, second class; 112 officers of administration, adjutants, first class; 112 officers of administration, adjutants, second class;—total, 350.

Hospital Orderlies (*Infirmiers*).—The Sections of *Infirmiers* are for employment in hospitals, with ambulances, and at medical depots. These are twenty-five in number, distributed as follows: The first nineteen are attached to the army corps of the same numbers; the twentieth and twenty-first sections are attached to the Nineteenth Corps (Algeria), making three sections to that corps; the twenty-second, twenty-third and twenty-fourth are attached to the military government of Paris; the twenty-fifth to the military government of Lyons.—A detachment, taken from one of the home sections, is on duty in Tunis. The total number of men in these Sections, in 1892, was 1439 non-commissioned officers, corporals and trumpeters, and 3960 soldiers, — aggregate, 5399. Each Section comprises: Hospital orderlies for duty in the wards; orderlies employed as clerks; orderlies for general duties, such as cooking, cleaning the wards, etc.

The budget for 1892 also provided for seventy-seven hospital chaplains and for rations and clothing for 292 hospital Sisters.

Regimental Hospital Orderlies.—There is one *infirmier* per battalion in time of peace, and in addition there is a corporal detailed to take charge of the infirmary. One of the regimental *infirmiers* is detailed each week for duty in the infirmary.

The patients in the infirmaries, and the convalescents, are rationed by the general mess. Such men as are on special diet live in the infirmary, and the cooking for them is done by one of the *cantinieres* designated by the commanding officer; if there is no *cantiniere*, all get their meals from the regular mess.

War Sanitary Organization.—The duties pertaining to the sanitary service in the field are: To anticipate, prepare, and execute sanitary measures which will insure the health of the command; in action, to render first aid to the injuried; to transport the injured to a place of succor; to organize ambulance, field and general hospitals. This service is divided into Service of the Front and Service of the Rear. The former comprises all sanitary formations which accompany the troops on the march, while the latter embodies all those formations which form a part of the armies in the field, but which do not march with the troops. Distributed in rear of the armies of operation, these formations are not subject to the army corps commanders, but to the Director of Lines of Communication, himself subordinate to the Director-General of Railways and Lines of Communication, and to the Chief of the General Staff.

The Service of the Front is divided into three echelons: (1) The regimental service, intended to give first aid to the troops when stationary, on the march, and during engagements: (2) The ambulance (field) hospitals, intended to supplement the regimental service during marches and halts, to receive the wounded on the battle-field, and to give them such care that they can be sent to the rear (*evacues*) promptly.—Each army corps possesses one ambulance hospital or dressing-station for each division of infantry, one for the cavalry corps, and one for headquarters, and each independent cavalry division has one ambulance hospital.—The ambulance hospitals are classed with the fighting train: (3) The field hospitals, intended to relieve the ambulance hospitals in the evening or the next morning; to continue the "evacuations" (despatch of the wounded to the rear); to treat the sick and wounded on the spot; and eventually to reinforce the ambulance hospitals on the battle-field. The number of field hospitals assigned to each army corps is fixed by the Minister of War.

The Sanitary Formations of the Rear constitute two groups intended for the formation of hospitals on the spot, and for "evacuation" and re-supply and refitting. The first group comprises: The field hospitals temporarily fixed from time to time in rear zone, to treat on the spot sick and wounded unable to be moved; and such of the permanent military and civil hospitals as are found near the lines of concentration, as well as the auxiliary hospitals created by the aid societies. The second group comprises: The evacuation hospitals placed at the heads of the different lines of communication — the patients are treated here until they can be sent to the interior; the station infirmaries and the infirmaries of the stopping-places on the lines of evacua-

tion, which furnish food, care and medicines to the sick and wounded *en route*, etc.; hospital transports, comprising railway evacuation trains, wagon evacuation trains, and hospital transport ships; station magazines established on the lines of communication; depots for convalescents and broken-down men, established along the lines of march and evacuation in the vicinity of field or evacuation hospitals, to receive such convalescents as do not have to be sent home.—These convalescent camps are established by the Chief of the Medical Service of the Line of Communication, to receive such men as are sent by the superior commanders.

The Infantry Division Ambulance Hospitals are divided into as many sections as there are brigades in the division. A headquarters ambulance hospital consists of two sections.

Hospitals of Evacuation (field) may be divided into several sections, etc., viz.: First, "Directions," consisting of medical officers of the active list, of the reserve, and of the territorial army; auxiliary medical officers; physicians and apothecaries impressed into service; the officers and cadet-adjutants of the hospital administration in the active, reserve and territorial armies; the *infirmiers* of the active and territorial sections, eventually auxiliary *infirmiers* detached from other troops; detachments of the military train; ministers of different creeds; eventually hospital Sisters: Second, Establishments created by the various aid societies, Red Cross, etc. —delegates, physicians, agents, *infirmiers*, litter-bearers, according to the decree relating to these societies.

For each battalion of infantry, each brigade of cavalry or group of mounted batteries, one medical wagon is allowed for the transportation of medical supplies. To cavalry regiments and horse battery groups are attached small carts for the transportation of the wounded, each to carry a medical pannier. Ambulance hospitals have various kinds of wagons for different purposes, but field hospitals are permitted no ambulance wagons, only vans for the transportation of their supplies.

The Medical Director-General is chief of the entire sanitary services. Each army has also a medical inspector, director of the sanitary service; each *Corps d'Armee* a principal medical officer, corps director; each division a principal medical officer, or surgeon-major, chief of the medical service. The lines of communication of an army have a principal medical officer, chief of the medical service. Finally, a fortified place or group has a principal medical officer or surgeon-major, chief of the medical service.

Each Director or Chief of Service controls his department—has authority over all the *personnel* on duty in the ambulance or other hospitals under his command, and with regard to these officers and men has the same disciplinary powers as other officers of his rank. The Officer of Administration controls, under the authority of the Chief Medical Officer, the administrative service, as well as the order and discipline of the sick and the *infirmiers;* under the same authority he commands and administers the detachment of *infirmiers*, having the disciplinary powers of a company commander.

The Regimental Sanitary Service is intended to give first aid at stopping-places, on the march, and during engagements; the *personnel* is as follows: One surgeon-major and assistant surgeon-major of the active service, and two reserve or territorial officers (assistant surgeon-major and auxiliary surgeon) to each regiment of infantry, Zouaves, or *Tirailleurs;* to each battalion of *Chasseurs-a-Pied* one active surgeon-major and one assistant surgeon-major (reserve or territorial); regiment of cavalry or *Chasseurs de Afrique*, only one active surgeon-major; each divisional group of six batteries of artillery has one assistant surgeon-major (active) and one auxiliary surgeon (reserve); the first group of corps batteries has one active surgeon-major and one reserve auxiliary surgeon, and the second group one active assistant surgeon-major and one auxiliary surgeon (reserve); a group of three batteries, cavalry division, has the same medical officers as the second group of corps batteries; first echelon of the park has one assistant surgeon-major (active), only, as likewise has the second echelon of the main artillery and bridge train park.

On a war footing, the regiments of infantry, of cavalry, and the regiments and battalions of artillery, have one *infirmier* per company, squadron, or battery; and in each

battalion or group of batteries, one of these *infirmiers* has the grade of corporal. Each infantry company and artillery battery has also in the field four bearers; each battalion and each group of batteries has, besides, one bearer-corporal; for a regiment of infantry there is one additional bearer, with the rank of sergeant. The additional *infirmiers* required on mobilization are furnished by the reserve—those for the infantry by the musicians and workmen, and those for the artillery by the musicians of the artillery schools. The complement is made up by the artillery musicians of the reserve.

The non-commissioned officers of the bearers of infantry, and the corporals from the musicians or workmen, are of the reserve.

The Chief Medical Officer directs the sanitary service under the authority of the commander of the regiment or battalion, and is aided by other medical officers in the order of their rank; the auxiliary surgeons (who rank as adjutant, non-commissioned officers) aid the medical officers of the active army, the reserve, and the territorial army, and can in no case become chiefs of the medical service.

The regimental *infirmiers* are exclusively employed in caring for the sick when the troops are stationary or on the march, under the immediate direction of the auxiliary surgeons; in battle they assist the medical officers in organizing and working the dressing-stations. They can be temporarily called, in case of urgent necessity only, to assist in the service of the ambulance and field hospitals. Regimental *infirmiers* and bearers, to the exclusion of all other combatants, are entrusted with the duty of picking up the wounded on the battle-field and carrying them to the dressing-stations; in the discharge of this duty they are directed by the non-commissioned officers and corporals of the bearers. When a battle is impending, the bearers report to the senior medical officer; after the action is over they return to the ranks.

When the troops are stationary, the regimental *infirmiers* are organized as in time of peace. During actions, the dressing-station is established by the medical officers and *infirmiers* of the battalion or group, and is connected with the firing line by the regimental bearers, who are the only persons entrusted with the duty of moving the wounded back from this line. The musicians of the battalion form a relay between the dressing-stations and the ambulance relays.

Division Ambulance Hospitals are subdivided into two sections. The *personnel* of the first is, one surgeon-major (active), one assistant surgeon-major (active), two assistant surgeon-majors (reserve or territorial), one officer of the Administration (supply officer), one chaplain, one student of the Lyons school, fifteen *infirmiers* (two non-commissioned officers, three corporals, ten privates), forty-nine bearers (one non-commissioned officer, two corporals, forty-six privates); of the second, one surgeon-major (active), two assistant surgeon-majors (reserve or territorial), one officer of Administration, fifteen *infirmiers* (two non-commissioned officers, three corporals, ten privates), forty-nine bearers (one non-commissioned officer, two corporals, forty-six privates).

The *personnel* of the Train, first section, is made up of one lieutenant of the train, one non-commissioned officer, one veterinarian, one corporal-quartermaster, two corporals, one blacksmith,one workman, one trumpeter, three mounted teamsters, thirty-four unmounted teamsters, four orderlies of the train for the mounted officers; second section, one lieutenant of the train, one non-commissioned officer, two corporals, one saddler, one workman, one trumpeter, two mounted teamsters, thirty unmounted teamsters, one orderly of the train for the surgeon-major.

Such is the *personnel* in each part of the sanitary service of this Army. The organization is simple, but, simple as it is, it demands of each of its members, outside of a knowledge of scientific questions of treatment, a very exact military execution.

In the recent issue of *The Broad Arrow* is the following:

> Not the least remarkable evidence of the great progress made by the French in the organization of their army is to be found in the official treatise, "Reglement sur le Service de Sante de l'Armée en Campagne." These regulations are marked by a thoroughness and attention to detail which, if carried into effect in war time, will result in the complete efficiency of their hospital service, and a corresponding diminution of suffering to the sick and wounded. The tactical employment of the

Ambulance Service is most carefully treated, and what is remarkable is the provision made for its presence with the most advanced troops.

V. THE GERMAN ARMY.

In accordance with the principle that the maintenance of the efficiency of an army is the essential element of success, and that therefore the care of the troops is one of the most important duties of the commanders and the administration, the greatest attention is paid to sanitary matters by the German military authorities. In this army—as in all others—the sanitary organization naturally divides itself into *personnel* and material. The former includes the medical officers, who have the rank of combatant officers and occupy positions of absolute equality with them; apothecaries who rank with administrative officials; non-commissioned surgeons and apothecaries; hospital stewards, nurses, etc.; and in active service the litter-bearers. The sanitary material and institutions are the garrison hospitals and regimental dispensaries, and in war the field hospitals, communicating and reserve-of-base hospitals, etc., etc.

*Peace Sanitary Organization of the German Army.**—The Medical Division of the German War Ministry is headed by the *Generalstabsärzt*—equivalent to Surgeon-General or Medical Director-General of the United States Army. In addition he is charged with duties similar to those of an inspector-general of a special army of the service. He has the rank, pay and emoluments of a major-general.

Each of the army corps—twenty in number, counting the two Bavarian corps—has a Surgeon-General (*Generalärzt*) as Medical Director.† These officers are divided into first and second class, and rank respectively with colonels and lieutenant-colonels.

The Surgeon-General of an Army Corps is the head of the Medical Department in his district, and distributes the medical officers as he sees fit. The senior surgeon-major (*Oberstabärzt*) of each division is appointed Divisional Surgeon. General (garrison) hospitals are under surgeons-major, who are appointed Hospital Directors, and are the commanding officers of the hospital *personnel*, with the powers of punishment of a company commander. The sick from all organizations serving in the same garrison enter the same hospital. Berlin and several of the large garrison towns are divided into two hospital districts, with a hospital in each.

The grades below Surgeon-General are: Surgeons-major (*Oberstabärzte*), surgeons (*Stabärzte*), and assistant-surgeons (*Assistenzärzte*). Surgeons-major and assistant-surgeons are divided into two grades, first and second class; there are also sub-surgeons and one-year volunteer surgeons, who rank as non-commissioned officers (with officer's sword-knot).

As a rule, a surgeon-major is the senior medical officer of a regiment, and surgeons or assistant-surgeons of battalions and smaller detached units, etc. The total number of medical officers proper in the whole Army, counting Bavaria, is, according to the last budget, 2068.

To the headquarters of each army corps is attached a Corps Staff Apothecary, who superintends, under the direction of the Surgeon-General of the Army, the procurement of medicines, etc., for the dispensaries of the several hospitals in the corps district. Apothecaries (who, as before stated, belong to the higher officials of the military administration) are appointed by the War Ministry on the recommendation of the Surgeon-General of the Corps; they have the standing of officers, but are without relative rank.

Hospital dispensaries are usually placed under the immediate charge of a medical officer, by the chief medical officer. Assistance is given in the dispensaries by one or more one-year volunteer apothecaries, *i.e.* pharmacists who wish to discharge their liability to military service in this way.

There is a Hospital Administrative Personnel which is recruited from non-commissioned officers with at least eight years' service, and who are divided into chief hospital inspectors, inspectors of hospital administrations, and hospital inspectors.* They need not be, and indeed rarely are, medical men;

---

* Data furnished by the Division of Military Information, Adjutant-General's Office, U. S. Army.

† There is also one Surgeon-General, Chief of the Frederick William Institute.

*The total number in 1888 was 191—forty-seven of the first, thirty-two of the second, and 112 of the third grade.

their duties are to take charge of the various medical stores and other material in the hospitals, being responsible to the Supply Department for their preservation, etc. These officials have been continued in service notwithstanding the change in hospital administration, which has been transferred from a branch of the Military Economic Department to a specially instituted department (Medical Division) of the War Ministry.

The Bearer Companies of the war formations are mobilized from the train battalions, and have no existence or merely a "cadre" in time of peace; there is, however, a large force of "*Lazareth gehulfen*," or hospital assistants, maintained in time of peace, one to each company, battery, etc., and made up of men who have been trained in minor surgery and in "first aid," and have the rank and pay of non-commissioned officers. The total number on the last budget was 3848.

Suitable men, who have been fairly instructed as soldiers for six months, are detailed, under the direction of the Surgeon-General of the Corps, as sick-attendants or nurses (*Kranken warter*) at garrison hospitals, where they are trained for service with field hospitals in time of war; their number is of course not fixed, but they may be said to vary from 400 to 600. There are a few civilians also hired for this purpose, from 400 to 500 in all.

War Organization.—The War Sanitary Order of January 10th, 1878, fixes the organization of the Medical Department of the German Army in the Field as follows: One Surgeon-General in Chief in Berlin, one Surgeon General attached to Imperial headquarters, one to each independent army, one to each army corps, one Division Surgeon to each division.

Two medical officers are attached to each battalion of infantry (of four companies, about one thousand total strength), and one hospital assistant to each company. Two men per company are trained as litter-bearers. A medical stores wagon is attached to each regiment (three battalions). A regiment of cavalry has three medical officers and four hospital assistants—one per squadron; a medical stores wagon is also attached. The light artillery has two medical officers for each battalion (of three or four batteries), and a hospital assistant for each battery. The heavy artillery also has two medical officers for each battalion (four batteries), and hospital assistants as in the light artillery. The staff troops have a medical officer and hospital assistant with each unit.

It will be observed from the foregoing that the regimental sanitary organization is very clearly defined. It forms the first line of medical assistance in active service, and its field of work in battle lies between the skirmish line and the collecting-stations.

The medical units comprise the regimental aid already described, bearer companies, field hospitals, lines-of-communication hospitals, and base hospitals.

The Bearer Companies are integral parts of the train battalions of the army corps to which they belong, and are numbered "First Bearer Company of the —— Army Corps," etc., etc. One of them is attached permanently to each division, and one is kept at the disposal of the Corps Commander and is attached to the Corps Artillery. Each is divided into two divisions, each complete in itself. The establishment of a bearer company is: Seven medical officers, one paymaster, one apothecary; officers of the train, one captain, two lieutenants, three under-officers of the train, three lance-corporals of the train, fourteen privates of the train, twelve soldier servants of the train, seven tradesmen, one sergeant-major of the bearer company, fifteen under-officers of the bearer company, two buglers of the bearer company, 176 lance-corporals and stretcher-bearers, eight hospital assistants, eight sick-attendants,—total, 261. Also thirteen saddle horses for officers, six troop ditto, twenty-six draught, and two spare draught,—total, forty-seven; also thirteen two-horse carriages.

The carriages of a bearer company are eight ambulances, two medical stores wagons, two baggage wagons, and one provision wagon—all two-horse. The ambulances are of the 1872, 1874, or 1877 patterns, and carry two severely and three slightly wounded men. Wagons of the former patterns are equipped with seven, those of the 1887 pattern with nine, stretchers, so that a bearer company with old equipment has fifty-six, that with new seventy-two; with each stretcher a knapsack containing dressings is supplied.

On each of the wagons of a bearer company are carried two shovels, one pickax, one ax, and one hatchet. In action the bearer companies form the second line of assistance; they work between the collecting-stations established by the regimental medical service, and the dressing-stations formed by themselves.

The Field Hospital constitutes the third line of medical assistance. For each army corps of two divisions are mobilized twelve, and for each corps of three divisions eighteen, field hospitals, each of which can receive 200 wounded or sick and can be divided into two sections. The establishment of a field hospital is as follows: Two surgeons-major, three assistant surgeons, one apothecary, one hospital inspector, one accountant, one assistant apothecary, one sergeant ward-master, one under-officer clerk, one under-officer storeskeeper, nine hospital assistants, twelve sick-attendants, one cook, two transport under-officers, two transport lance-corporals, one transport trumpeter, nine transport drivers, eight officers' servants,—total, fifty-six, officers and men;* five officers' riding-horses, five troop ditto, twenty draught,—total, thirty horses; one two-horse baggage wagon, two two-horse medical stores wagons, three four-horse material and stores wagons, one two-horse carriage for officials,—a total of seven carriages. The medical stores and baggage wagons are the same as those of bearer companies, and in the former are carried the hospital stores required, a coverlet and a pair of sheets for each patient,—but no other bedding, which is obtained locally by requisition, and no tents; all stores have been reduced to the lowest possible number, so as to diminish the transport and increase the mobility of these hospitals.

The Lines of Communication and War Hospitals are, as a general rule, taken charge of by the auxiliary societies for aid to the wounded. For the war hospitals which are formed to take over the wounded who cannot be moved when the field hospitals start to follow their corps, each army corps mobilizes nineteen medical officers, three apothecaries (six other officials), twenty-seven hospital assistants, three under-officers, thirty-six sick-attendants, twenty-four train soldiers, and three cooks. All persons in medical units wear the Geneva Cross above the left elbow.

The War Sanitary Personnel and Transport embodies sixty-three bearer companies, 258 field hospitals and twenty war hospitals, with a total of 2111 medical officers, 189 train officers, 1338 officials, 29,673 non-commissioned officers, 10,701 horses, and 2625 carriages.

*Field hospitals may also be equipped with four two-horse material wagons, and one two-horse ambulance wagon, in place of the four-horse material and stores wagons; in which case they have twenty-eight horses and nine carriages.

FATTY DEGENERATION AND ITS MASQUERADES.*

BY EPHRAIM CUTTER, M.D., LL.D.

When muscular, nervous, glandular and fibrous tissues are replaced by fat,—*i.e.* oil, amyloid, lard, wax, stearic acid, etc.,—the condition is denominated fatty degeneration, or a fatty ill. This is a normal process in the corpora lutea and the sub-involuting or pregnant uterus; but the fatty epithelia of the mammæ, liver, sebaceous and ceruminous glands are not ills, neither is obesity a fatty degeneration, because there is no substitution of tissue but merely excess of normal development. Nevertheless obesity tends to, and may be found in connection with, fatty degeneration. Organs invaded by fatty degeneration soften, necrose, and break down as in destructive inflammations, hence this condition is often confounded with inflammations; and as a matter of fact the two sometimes occur together, though the nomenclature which terms fatty degeneration of the kidneys a "nephritis," and that of the spinal column a "myelitis," is unwarranted and a masquerading of real things.

Regarding causes: The English idea is that the point of departure is a chronic retardation or impediment of function, specially of a mechanical kind from want of proper exercise, from ligatures, from abnormal pressure, etc.—in other words, where there is retardation or impeded circulation of capillaries, of glandular osmosis, of secretion or excretion, of nerve force, of chyle, of

*Read before the Mississippi Valley Medical Association.

lymphatic fluid, etc., there will be found fat in some of its forms replacing other normal structure. It must not be forgotten that fat is normal in its own *situ naturali* and not in excess.—The Micrographic Dictionary justly regards this doctrine as one of the most important contributions to the knowledge of the nineteenth century acquired by the use of that beautiful and useful instrument, the compound microscope, which is moreover indispensable to the diagnosis and treatment of fatty ills and their masquerades. This doctrine is also a foundation for calisthenics properly used, and for the dignity and usefulness of daily labor.

The conventional idea is that fatty ills arise from the excessive and exclusive use of fats and carbo-hydrates as food; the gourmand's delight, the Strasbourg pie or *pate de fois gras*, made from the livers of geese that have been constantly stuffed and crammed with food beyond repletion, meantime being kept in close and heated confinement, is usually considered sufficient cause for this statement. Yet every one knows that an exclusive fat diet tends to confer fatty ills.

The American idea, which so far as the writer knows originated with Doctor James H. Salisbury, is that carbo-hydrates, or food from the vegetable kingdom, fed in excess, particularly to those of sedentary habits, by fermentation incline to form carbonic, sulphydric, phosphydric and other acid gases which, developed persistently and in excess, tend to paralyze certain parts of the body, and that such paralysis retards and impedes function. Thus is produced the same stasis referred to by our English brethren, with the same results; and the evidence goes to show that this fact more than any other explains fatty degeneration. The connection between the consumption of alcohol and fatty degeneration is well understood. Drunkenness is partial paralysis. The long and steady use of beer, though it may never induce intoxication, unquestionably has a tendency to shorten life by some form of fatty degeneration, which may assert itself in many parts of the body.*

*The substitution of beer for whiskey is claimed to be a move for temperance; but this I very much doubt, since it ultimately leads to the acceptance of malt beverages by many who would never otherwise use spirits.

Note that the action of certain poisons is a form of fatty degeneration; phosphorus will produce death in twenty minutes, when the microscope will reveal—as in a recent case observed by Doctor H. P. Bowditch and myself—the heart muscles undergoing extensive fat necrosis. Retardation of function is another means of inducing fatty ills—this may be seen in the parenchyma of the leaves of the New England maple, resplendent in glorious death, during the fall of the year; also in the parenchyma of Baldwin apples where the barrel-head has impressed a smooth facet.

Fatty ills occur often in organs of complicated knotty structure, such as the kidneys; in tough fibrous structure, as in the liver; in organs where the blood goes backward on itself, as the heart, because the circulation is more readily obstructed or impeded. On the contrary, when the capillary circulation is free and normal, other things being equal, fatty substitution in normal tissues cannot occur. A too quick circulation characterizes inflammations.

When seeking to diagnose by the clinical microscope a suspected case of fatty ill, the evidences available, in priority of sequence, are as follows:

Amyloid bodies.—These are almost exactly like starch grains, and are found in the blood, urine, tissues, and on the skin—I think these are amongst the first to appear in fatty degeneration, and sometimes the last to go; some regard them as normal in the brain tissues, but inasmuch as brain tumors have been found post-mortem in persons who had never given evidence of brain trouble, this so-called "normal amyloid" may be abnormal and be latent.

Free oil in blood, in large and small globules, or in various amœboid shapes.—Normal subcutaneous fat is not an oil, but a solid or semi-solid; and subcutaneous oil, though of itself not an important sign of fatty ills, when combined with other signs is very important—it evidences a lowered vitality and diminished power of resistance of the body; it is not virile.

Free oil in the white blood-corpuscles.—I endorse this as most valuable diagnostic evidence of fatty ill—a fact first pointed out by

Doctor James H. Salisbury. Normally the leucocytes do not contain oil globules, and no patient is really cured unless these oil globules disappear from the white blood-corpuscles.

Muscular fibre in fatty degeneration.—Make a section over the deltoid through the skin, thrust a barbed spear into the muscle, and withdraw, bringing with it some of the muscular tissue, which under the microscope shows globules of fat surrounding the fibrillæ.

The physics of the urine voided before rising in the morning.—Albumen, fatty epithelia, casts of kidney tubes, amyloid, free oil.—Should the first three be absent in the first specimen, separately or collectively, I am accustomed to take seven successive specimens in a suspected case: I have yet to find a case where amyloid and free oil appeared in blood specimens and in white corpuscles, in which also albumen or fatty epithelia or casts were not found during a week's search. It does not answer to have urine examined morphologically or chemically once in a year or two, for it may be normal one day and abnormal the next. Amyloid and free oil are rare; regarding the latter, one must be certain the oil is not the result of employing an old castor-oil bottle as a container.

Oil in fæces.—This is an additional sign when oil is not present as a medicine or food; here the pancreas is often at fault.*

Microscopical signs not well known.—Pain is often mistaken for rheumatism, though the latter may be a complication; the morphology of rheumatic blood being absent we must look elsewhere for a cause. I think there are cases of neuralgia and hyperæsthesia caused by fatty degeneration, for angina pectoris arises from cholesteric deposits in the coronary arteries; *tic douloureux* has been caused by fatty infra-orbital nerves; and I have seen, in a male adult, intense general hyperæsthesia attending a fattily degenerated sub-maxillary lymphatic—learned laymen and physicians called it cancer, and though aspiration showed the gland to be undergoing fatty degeneration, as determined by morphological examination, I could not convince the patient that his throat was not "full of cancer," and he starved to death, claiming that the hyperæsthesia and the activity of the salivary glands would not permit him to eat. The autopsy in this latter case proved my diagnosis to have been correct—there was no cancer in throat, pharynx, tongue, or larynx—only the maxillary lymphatic was fattily degenerating. The man had for several years been under treatment for impending Bright's disease. While it is possible to have fatty degeneration without pain, it is well to remember that pain is in some instances caused by this morbid process.

The detection of fatty degeneration of muscles by inspection with a barbed spear, the presence of oil globules in the leucocytes and blood, and the presence of amyloid in the circulation, are facts worked out by Doctor James H. Salisbury, but the knowledge of the presence of free oil in the fæces is the result of my own researches. I believe, moreover, no one besides myself has emphasized the importance of these diagnostic appearances, in connection with those afforded by the urine, as embodying *a new physical sign of the pre-apoplectic state*, of which I shall have something to say in a forthcoming paper with illustrative cases.

First among the masquerades of fatty ills is *amyloid*. This I think should be regarded as one of the early stages of fatty degeneration, from a clinical point of view, because of its close affiliation with fatty ills.—I have found this practical estimate safe and useful. Treated as a fatty ill the amyloid often disappears permanently—indeed, it yields very readily to treatment.

The idea popularly entertained, that *Apoplexy* comes from an increased force of circulation, has some foundation, but not the special significance that attaches to the weakening of the cerebral arteries by the partial change of their substance into the soft weak bodies of oil, lard, tallow, or grease; often the artery gives way under normal heart-pressure during sleep.—The essence of

---

*These clinical morphologies are more characteristic close to the patient. A clinical microscope used with a common candle is able to do most of the work at the bedside, hence the name. The Cutter clinical microscope has been used with all objectives, even including the high power of $\frac{1}{16}$ of R. B. Tolles, and is thus able to cope with the present problem. The one-inch objectives are the best to detect the kidney tubule casts.

apoplexy is fatty degeneration of the arterial muscular coat.

The causal lesions of *Retinal Apoplexy* are the same as those of apoplexy; the muscular coats of the retina, softened by some form of fatty degeneration, yield to normal heart-pressure; the ophthalmoscope reveals the extravasation of blood and the clots in the retinal substance; the mechanical arrangement of ocular tissues facilitates the retardation and impeding of circulation.—A healthy ocular artery should not rupture from any intra-vascular pressure during life.

Some may not agree that *Amaurosis* is a fatty masquerade, but I do not feel at liberty to ignore it, since oculists assert this affection is chiefly due to a diet of carbo-hydrates in excess, and that retinal paralysis is part and parcel of fatty degeneration.

Glaucoma, also, should be considered as fatty degeneration, and it has been most interesting to witness the manner in which oculists struggle with the surgical side of this serious condition; the primary treatment should be systemic, the surgical secondary.

The consensus of medical opinion is that *Angina Pectoris* is due to calcareous deposits in, or atheromatous degeneration of, the coronary arteries; but cholesterin is often the basis of the deposit, though lime deposits also occur along with the fatty. It is easy to see how fatty degeneration of the heart muscles may follow partial obliteration of the coronary arteries—if the English idea is entertained; and the neuralgic element of angina pectoris may be explained by nerve force being partially cut off owing to diminished flow of blood, and by the partial heart paralysis developed through overworked but otherwise sound muscular tissue. Overworked muscles cause cramp; pain is due to a partial paralysis.

The peculiar ring about the periphery of the cornea known of *Arcus Senilis* is due to deposit of fat. — The transparent glassy cornea is nourished mostly by imbibition; the circulation is not free, and hence is easy to retard or impede; and the fatty deposit comes as the powers of life fail in the aged.

Atheroma "consists of globules of oil of the most varied sizes, frequently exceedingly minute, mixed with albuminous matter in the form of amorphous masses of flakes and molecules, plates of cholesterin, and granules of carbonate of lime." (Micrographic Dictionary.)

Aphasia is literally "dumbness," nevertheless in the medical nosology it is made to cover the terms and conditions known as ataxic and amnesic (inability to employ language fluently); it is, I opine, merely the sequel to fatty degeneration of the speech ganglionic nerve centres.

Bright's Disease of Kidneys is diagnosed by the presence at one time, or in successive examinations during seven days, (first) of albumen, (second) of casts, and (third) of fatty epithelia.—How easy it is to impede function in the kidneys because of the reversed currents of blood in the papillæ, Malpighian tufts, and urinary tubules! But this masquerade is in no way revealed by such titles as "interstitial" or "parenchymatous" nephritis, etc.

Bright's Disease of the Lungs is a comparatively rare malady, known in Germany, that simulates consumption; yet it is only a pulmonary fatty degeneration, as evidenced by the clinical morphologies; histologically and anatomically there is no reason why the lungs should not exhibit fatty degeneration as well as the kidneys.

Broken Heart may be literal as well as figurative. When the muscles of the heart are largely replaced by fatty degeneration they are liable to rupture under normal exertions; indeed, when the vast unceasing work of this organ is considered, it is a daily miracle that this accident does not more often occur.*

Some nineteen years ago I learned for myself that all *Cataracts* were forms of fatty degeneration of the crystalline lens, and I possess a number of photographs taken by myself at that time which corroborate the correctness of this position. Sir Benjamin

---

*Many creatures — those that depend for existence exclusively upon vegetable diet, such as the *Leporidæ*—are especially susceptible to rupture of heart as the sequel of shock or fright. The great bulk of hares—miscalled rabbits—found in market exhibit this condition. We have repeatedly seen "cotton-tails" killed by a single pellet that just entered the skin: twice saw a varying hare (*Lepus Virginiana*) die from being seized by a dog, though there was neither wound or compression; and even the shock induced by the snare is often sufficient.—In each instance the right ventricle was the seat of the lesion.—Ed.

Ward Richardson personally told me he had produced cataracts in both eyes of guinea-pigs and frogs in less than ten minutes' time by hypodermatic injections of a saturated watery solution of common sugar; and sugar in excess is a great cause of fatty ills.

Intestinal Concretions, in most instances, are made up of accumulations of fatty acids, though some are calcareous.

Gall-stones.—A woman once came to me for examination who insisted she passed gall-stones after using olive oil; the morphology of these concretions proved them to be made up from fatty acids derived from the oil. Genuine gall-stones are concretions of fatty acids from the liver.

"*Heart Failure*" is a double masquerade in that it is applied to both a cause and a disease.—In the eighteenth century they did better, as a treatise was written (1700) on "Causes of Heart Failure." This term means simply a fatty heart; but besides, the diagnosis includes the gouty diathesis of elderly people, rigid arteries, and flabby tissues.—The physician who gives in "heart failure" as a cause of death, should produce the evidence of cause, and thus honor his profession: when a bullet or knife penetrates the heart, the organ necessarily "*fails!*"

Other maladies that masquerade as fatty degeneration are: Melancholia; dementia; neurasthenia, or nervous prostration; paraplegia; paresis; hemiplegia—see remarks on apoplexy already made; softening of the brain; *tic douloureux;* rupture of muscle; impeded circulation from embolism; senile gangrene; hebetude, or listlessness; pernicious anæmia—it is an American idea that the terminal arterial vessels in the spleen become fattily degenerated, hence a loss of blood-discs so pernicious and severe as to be fatal (Salisbury); shaking palsy; shock developing paralysis and Bright's disease; puerperal convulsions—a masquerading that is in reality an acute fatty degeneration; retinitis albuminuria; rupture of uterus; general hyperæsthesia; hæmophilia—a case of fifteen years' standing lately came under the care of my son, Doctor John A. Cutter, in which there has been decided improvement.

More instances might be cited, but the foregoing are sufficient to establish the fact that it would be better if medical nomenclature presented fewer masquerades; better to call things by right names, whereby the way would be made clear for proper treatment, and better results accrue to the practice of medicine.

Regarding the management of fatty ills, and the principles involved, it may be said Nature usually cures if allowed—that is, her actual and potential forces operate to restore normal in place of abnormal tissues. The cause or causes, whatever it or they may be, must be removed; in particular, such foods as fats, carbo-hydrates, or animal or vegetable products that tend to fermentation and formation of gases within the alimentary canal, must be stopped, including also alcohol, whether formed outside or inside the system; malted liquors are specially objectionable. All physical obstructions also, such as corsets and tight environments of the body, require to be removed, since the circulation must be free and clear. In order to quicken the circulation and stimulate the functions that are impeded or retarded, free use should be made of such quickening foods as hot water and beef. Give the former at the temperature of tea or coffee, one pint one hour before each meal and on going to bed; distilled water is best, spring water next, hydrant and well waters poorest of all.—Note that hot water starts gases quicker than anything else, by promoting peristalsis downwards, and sometimes upwards by belching; it relaxes nerve spasms; dilutes normally the blood so that it will flow through the capillaries, whose length has been estimated at over 100,000 miles; washes out the stomach, bowels, liver, kidneys, skin; dissolves gravels, which are great causes of retardation and impeding of functions; carries the blood to the surface of the body; and is not a dangerous remedy, as some aver.—To sum up, if you wish to quicken the circulation, chyme, glands, alimentary canal, osmosis, nerves, lymphatics, so as to keep the body systemic in "good running order" literally, use hot water as indicated; indeed, if cut down to only one resource in these diseases, retain hot water, which alone has cured cases irreducible by other means.

The heart quickly responds to, and is strengthened by, beef. It is not necessary to stimulate the frequency of the pulse, but rather to increase its *dynamos* without quick-

ening the beat,—even our vernacular expresses this idea in classing beef as a "hearty" food. If people, instead of being afraid of "hearty" food, would use more of it to strengthen the heart, they would thus obviate the existing prevalence of fatty ills! Mutton and lamb are next to beef for this purpose; then follow eggs (specially the whites), game, cod-fish, fresh lobster, scollops, clams. If possible have the patient live on hot water and the foregoing foods alone, with pepper, salt, and butter for relishes; use sparingly, also, Worcestershire and Halford sauces—not all these together, however, but one or two at a time. To those who cannot do this, the two-thirds by bulk of animal food to one-third from the vegetable kingdom—not counting liquids—would be much better than the ordinary conventional proportions. Despite the assertions of vegetarians, the condition of the urine shows that *this proportion is normal.*—No one ever knew a case of fatty degeneration to *recover on a vegetable diet*, but I have seen numerous cures by following the diet just outlined.

Management is an important element in the treatment of fatty ills; a French investigator states that physicians treat but twenty per cent. of the sick. I had a multimillionaire sick with Bright's disease who was *too poor* to be under observation; he *undertook* his case literally. Cases of fatty ill must be under treatment for months; charges should be made according to means of patient. The servant girl cannot pay as much as her rich master; it is better to have something for services from her than to treat her in a hospital or a dispensary for nothing.

It is also necessary to treat fatty ills by conservation of vital forces, thereby securing more to the needs of the economy; these include: Rest—all schools of medicine adopt this principle of rest in illness; proper exercise; a light and dry atmosphere; stimulus of ideas, will, etc.; stopping the "useless expenditure of nerve force in ineffectual mental operations;" trust in God—Oliver Wendell Holmes counseled young physicians to avail themselves of the good effects of spiritual advice to the sick, and "faith curists" secure happy results in *some* instances by stopping all worry and fret over the cares of life; stop the leaks in the nervous system, thus saving the waste power to do body systemic work with; do not forget also that life is a question of the making and using of vital forces, that careful husbanding saves and prodigal expenditure lavishly wastes and leaves not enough to properly perform functions—hence fatty ills arise; the presence of a strong and healthy personality confers power, as when "the woman with an issue" touched our Saviour's garment and was healed, he said, "Who touched me? For I perceive that virtue has gone out from me."—It is also said of the elder Pitt that none could be with him in his cabinet without feeling stronger for it; and my father, Doctor Benjamin Cutter, had the power to soothe teething babies to sleep that had worn out their parents in nightly vigils; indeed, the best and most popular practitioners have this dynamic power, which forms no inconsiderable item in the measure of their success, regardless of medical knowledge; but some, on the contrary, present the opposite, and, like vampires, sap the vitality of their patients.

Massage is another valuable therapeutic measure, the secret of which lies more in the conferring of force than in the manual movements; I have known some *masseurs* to deplete patients of strength instead of bestowing it upon them.—This is an important subject worthy of a special paper. Hygiene also must not be forgotten; neither fresh air, exercise or baths can be had without some exertion.

Strengthening the heart is always an essential measure, which can be done with the aid of food, as already mentioned; by diminishing its work, as by posture, the feet being higher than the head, as in my invalid chair; by removing the gases which paralyze this organ more or less; by the laying-on of hands over heart and stomach; by dry heat, with Indian meal as a vehicle, for example; by drinking hot water, combined or not with aromatics; by absorbing the atheromatous and calcareous deposits of the coronary arteries by treatment; by going up stairs or heights slowly; and by appropriate drugs.

Salicin, strychnine, digitalis, combinations of the fluid extracts of cinchona, coca, pyrus malus rad., lettuce, yerba santa, grindelia robusta, and others of the mild vegetable tonics, should be employed as indicated;

some patients need a great deal of medicine, others little; the function of the physician is to employ what is needed. Pain is also a bad element in some cases; morphine is interdicted, yet a case of locomotor ataxia under my son's care would have died if not for the use of Brown-Séquard anti-neuralgic pills; cannabis indica is a good sedative; valerian, sumbul and asafœtida may also be employed; Messrs. Parke, Davis & Co. at my son's request made up their Liquor Sedans with glycerin and no sugar, and have listed it as "Liquor Sedans ℞ 2, without Sugar;" this is a valuable sedative and tonic and should be widely used.

Music and vocal culture are forms of aërial motion, which penetrate the body, and, as demonstrated by Professor Dogiel, of Kazan, Russia, increase the force of the blood circulation if not of the spirits; again, Professor Tarschanoff of St. Petersburg has shown that music rests fatigued muscles and helps to drive out carbonic acid while increasing the consumption of oxygen. Music then is a pleasant medicine for fatty ills caused by retarded or impeded circulation. This subject is attracting attention, and ere long I expect to see music ordered from the druggists (music boxes, etc.) as we now order drugs; at all events I have adopted it as a medicine in my public lectures; and it is an old idea worthy of revival.

Heat, which is a form of motion, imponderable, colorless, invisible, yet measurable, pervades the body during life, and its absence is a good sign of death; it is a royal means to restore retarded or impeded function.

Light is an exquisite and almost incomprehensibly rapid form of motion; without it, man would die; he was made to live in the life of light; therefore it is indicated in the treatment of fatty ills.

Another remedy is galvanism, which has a double current of motions to quicken function.

I might cite the many and important cases upon which this paper is founded, and in which the evidences of fatty degeneration were found and removed by modes of treatment herein outlined, but time and space will not permit; I therefore reserve these for some future occasion.

Equitable Building,
New York City.

THE EVOLUTION OF RELIC WORSHIP—A PAGE FROM THE HISTORY OF MEDICINE.

BY P. C. REMONDINO, M.D.

Belief in a supernatural or a theocratic medicine has always existed—it was the first form of medical theory that suggested itself to primitive man, as, in accordance with the processes of evolution that mark his mental development, he emerged from animal into intellectual life. Fear and terror were the sentiments that first inspired ideas either of medicine or of religion, and these sentiments were more or less modified by the topography and meteorology of the country. A mountainous, echoful, wooded region, subject to great and sudden storms, acted more on the imagination than a flat and level waste. It required a towering Olympus, a cloud-crested Sinai, or the solitude and awe-inspiring sublimity of the vale of Crissa shadowed by the peaks of Mount Parnassus, to evoke from the imagination mythological ideas. In his benighted state, man first materialized his nebulous ideas of a deity by setting up a stick or the mummified remains of some animal as a fetich; later on, and with an upward evolution of the intelligence, he carved out of wood or stone a reflection of his image of deity. Mounting upward in the intellectual scale, his religious ideas undergoing a corresponding refinement, objects of imposing proportions gradually replaced the inanimate objects of fetichism. A lake or river, a mountain or a vale, a spring, brook or tree, then became the abode of deity. Even here, the combined elements of religion and of medicine comprised in the disappearing fetichism had no connection with philosophic ideas of morality or hygiene. Religion was as yet all for national, family or self protection, whether in war, the chase, in sickness, or in connection with the more material productions of the earth upon which men fed. Later on came the combination of astrology and mythology and the worship of the planets; medicine was made to enter into the new scheme, and we find that as late as the eighteenth century planetary influences in conjunction with physical ills and medications were occupying the minds of the otherwise intelligent.

Medicine was for centuries a priestly pre-

rogative and monopolized by the temples and their attendants. Unfortunately, that ancient history which we know Egypt must have possessed concerning the rest of the world has been lost, and we have only the slight glimmer afforded by Plato; our knowledge of medical systems can therefore only be traced backwards from Greece to Egypt and India. The well pronounced theocratic medicine and hygiene of the Hebrews, founded on the most solid basis of philosophy, emanated, without doubt, from the Egyptian temples. However reverent or orthodox we may be, we cannot escape the conviction that the theocratic authority was here simply used to compel the observance of regulations which the Hebrews could not otherwise have been made to observe or to understand. In this respect the Mosaic medicine resembled that of the Greek temples, shrines, and asclepions, or the still earlier medicine of the Egyptian priesthood. The Philistines and other disreputable and ungodly conglomerations living in the vicinity of the Chosen People, ignorant of the fact that Mosaic laws were founded on a knowledge of physiology, pathology, and other branches of vulgar medicine, attributed all the physical benefits enjoyed by the Jews to the watchfulness of Deity; which only confirmed them more and more in their own errors and in the more assiduous worship of *their* gods, from whom they expected to obtain like immunities.

The Greek Hippocrates was the first to deliver medicine from its theological entanglements, and to show the earthly origin of diseases, as well as that their cures depended upon a philosophical understanding of them. With the elaboration of philosophical studies, Greek medicine became a science, and, gradually invading the West, uprooted the medical superstitions of paganism and of the savage tribes brought under the influence of the new civilization. Meanwhile came the Roman conquest of Judea and the destruction of Jerusalem by Titus, with the dismembering of the Jewish nation and the disappearance of their theocratic medicine. Christianity was then slowly struggling into existence, accompanied by an evangelical medicine somewhat similar to that of the Christian Scientists of the present day; and Roman medicine presented as many conflicting sects and creeds as are at present to be found in the United States. There were the pagan superstitionists, the Galenists, and the Methodists, and the profession was being torn over the disputes that were carried on between over-zealous therapeutists and Fabian temporizers—between too much medication on the one hand, and too much expectancy on the other. Doctors traversed the streets of Rome, with a miscellaneous rabble of admiring disciples at their heels. Medicine and demagoguery went hand in hand, and it was a continued medical Donnybrook Fair. Schools of Galenic medicine, nevertheless, flourished, and the asclepions, or hospitals of the Galenics, were of great benefit to the people; but the masses were still superstitious, and along with the medicine of Galen and that of Erasistratus flourished Asiatic magic and Egyptian paganism stripped of its ancient philosophy.

In the fourth century, as a result of the sudden conversion to Christianity of Constantine, the state of medicine in the West underwent a great revolution, which must be partly attributed to the influence of the empress mother Helena, who, with more fervor, zeal and Christian piety than either philosophy or science, completely suppressed rational medicine, and along with it all the warring medical sects; and on the ruins of these she planted an altogether new form of theocratic medicine under the guise of relic worship and relic influence. All practices of medicine not in accord with the strictest dogmas of the new theocracy were promptly outlawed; the asclepions were closed; and the Nestorian Christians (who refused to subscribe to the wholesale destruction of all rationalism), as well as the Jews (who through their religious teachings believed in a rational medicine), were driven to the Arabians, with whom they could meet on a level in their ideas of the unity of God, as opposed to the Trinitarian doctrine decreed by the Council of Nicæa. In Arabia, exiled rational medicine found a temporary resting-place, whence it was to reënter Europe in the keeping of its protectors with the ending of the Crusades some seven centuries later. In Constantinople—the Byzantium of the Romans—the hospitals taken from the Nestorians were given into the care of the new Christian clergy. The

civilized world then saw an accentuated revival of the old Hebrew theocratic claims. Religion was paramount to all else, and the pretended representatives of God took precedence in all things. Saint Ambrose then set the pace through which the papacy was to rule the rulers and their nations for many centuries to come.

Saint Ambrose was to the Western church of the fourth century what Becket undertook to be to the English church in the twelfth. Ambrose was a much greater man, however, than Becket, and when he defied the emperor of the world by his memorable sentence, "The emperor is of the church, and in the church, but not above the church," he fully adjusted the position that the church was to hold in the future, and which it so signally exemplified in its treatment of Henry IV. in the eleventh century. The claim was very simple, depending wholly on the admission that kingly rule was subordinate to theocratic, of which emperors and kings were mere subjects. A consummate diplomat, a born ruler and leader as well as a great executive, an artistic and exceedingly refined and esthetic ceremonialist, a cultivated logician, and a Scripture scholar who could well combine the lessons of the Old and those of the New Testament,—fired by a zeal, a piety, and a philanthropy second only to that of Saint Paul,—Ambrose was well calculated to lay the foundation of the power of the church, as he charmed the people and was fully able to overawe the various emperors and empresses that reigned over Rome during his triumphant prelateship in Lombardy. Carried away by his religious enthusiasm, and undoubtedly influenced by his surroundings, he took an entirely opposite stand from those assumed by Saint Chrysostom in Byzantium and Saint Martin in Gaul in reviving the age of miracles, the veneration of relics and the belief in their miraculous power. The resting-place of the two martyrs Gervaise and Prodatius having been revealed to him in a dream, their remains were exhumed and enshrined in the cathedral church, and from this source was fanned into a bright flame the idea of remedial intervention on the part of relics; and here on a firm and lasting basis was established the power of a new theocratic medicine.

During the same century the empress-mother Helena had discovered the True Cross whilst excavating for the foundation of the Church of the Holy Sepulchre on Mount Calvary; and from various quarters were gathered the Holy Coat, which the cathedral of Treves now claims to possess, and all the various accessories that served at the Passion. We may well form an idea of the number of relics that flooded the West, from the inventory of those brought back from the Holy Land by one single returning pilgrim. This was Saint Anstremoine, of Clermont in Gaul, whose stock of relics comprised some of the hair and beard of our Lord, all the nails of his left hand and two from his right, together with a number of parings from the others; a piece of the sponge that had been soaked with gall and vinegar at the crucifixion; a portion of the crown of thorns; a piece of rock from the holy sepulchre, with a part of the shroud or winding-sheet in which the Saviour had been wrapped at his burial; and a piece of bread from the Last Supper. When this is well considered, and also that every returning pilgrim was as well laden as his means of purchase and transportation would permit, and every catacomb and cemetery teemed with the ready remains of thousands of martyrs, we can well understand how all the churches were supplied. The field of Waterloo has furnished enough buttons, breast-plates, shako ornaments and military accoutrements to fit out twice the number of men engaged in that battle; and I well remember that during my stationment at Williamsburg, Virginia, an enterprising firm of Northern undertakers patriotically advertised that they were able, for a consideration, to furnish the body of any Union soldier that had fallen in that battle. It is needless to say that the recipients of the little cases containing the remains did not enter into a too close identifying analysis, just as it is needless to say that undoubtedly many of the bodies so shipped were the ones asked for, as many graves had been marked. In the fourth century it was considered very impious to doubt or question the authenticity of any saintly relic, and, we might even add, rather dangerous in a psychological sense, as suggestive punishment prompted by remorse and re-

pentance was most likely to follow. So by the work first set in motion by the Empress Helena, confirmed by Saint Ambrose, and stimulated four centuries later by the Empress Irene—who was a worthy successor of Helena—the worship and the intercessory influence of relics became accepted dogmas in the church.

There is no material difference, in the theocratic bearing of the subject, whether one class of believers undertakes to allay an epidemic of cholera, plague, smallpox, or any pandemic disease, through the exhibition of relics and processions, or through humble and silent prayer in the solitude and dreariness of an American clapboarded house. The irrationalism is all the same, and, although the superstitious details may differ, the piety and zeal originate in the same sources and tend to the same ends. It is a straying away from the path of reason and an utter neglect of all the teachings of philosophy and of tried science. Whilst in the hands of so-called purely divine medicine — whether through relics, exorcism, processionings, fasts, vigils, or only through faithful prayer—Europe was ravaged again and again by devastating epidemics: the Jews, who in their continued observance of the philosophical hygiene engrafted in their creed, escaped the virulence of these outbreaks, were more than once massacred as being in league with the devil. And this is the tendency and end of all irrationalism. It was so when pagan Greece worshipped the spear of Achilles and the Palladium, along with the tools that had built the Trojan horse; the Olympic traditions and irrational mythology of that period could ill brook the rationalism of a Socrates, who was therefore disposed of by a judicial potion of hemlock; it was only an episode of the struggle between science and philosophy on the one hand, and blind and ignorant superstition on the other such as slew Hypatia in the streets of Alexandria, through the fanatical adherents of Cyril, in the fifth century. And we are slowly drifting in a direction that tells us that, whilst some men are advancing, the great mass cannot emancipate themselves from the inherent love of the marvellous and of the mystic that we see in primitive man.

San Diego, California,
September 16th, 1895.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., OCTOBER 10th, 1895.

Editorial.

THE "NEW" MEDICINE.

Report has it—and there is apparently no room for doubt—that at the last session of the Mississippi Valley Medical Association one of our Missouri brethren expressed his belief that the medical man "is in danger of becoming too professional;" for his own part, he was "in favor of proprietary remedies which have come to the profession through pharmaceutic channels."

If this "prophet" is to be accredited, it is high time medical schools were closed, medical and pharmaceutical societies disbanded, and pharmacopœias, dispensatories, and works on pathology, anatomy, physiology, therapeutics, etc., relegated to the junk shop —in fact, let the present practice of medicine go where the Bard of Avon long ago wished to relegate it — in other words, to the "demnition bow-wows." This is an era of newness; everything is "new," even the doctor. Philanthropy is the only true science, and if the physician desires a share therein he must, perforce, at once start a factory for the manufacture of pharmaceutical nostrums, or manage a medical periodical in the interest of the same. Half a century ago the Ayers, Holloways, Schencks, Radways, Jaynes, *et al.* were anxious to furnish proprietaries to the profession "through pharmaceutic channels," but were deterred therefrom owing to the respect and dignity that hedged about the too professional character of the medical practitioner of those days: thus was missed the golden opportunity that came almost unsought to their successors. Now medical

text books are effete; the Hippocratic oath obsolete; physiology a "back number;" therapeutics unmitigated rubbish; pathology valueless without a French or German hall-mark—but all these can be readily replaced by the literature furnished gratuitously by the proprietary-medicine interest, or by the chipper elucidations of the gentry who suavely drop samples and do not hesitate to solve off-hand the most abstruse of medical problems.

The old "physic" was a relic of barbarism. The "new" medicine is philanthropic and gratuitous. Then why not permit the proprietary gentlemen to issue diplomas and licenses to practice, since it is to be only through their sufferance medicine is to exist? The "new" practitioner must enter hand-in-glove with these empirics and quietly and thankfully accept such crumbs as fall from the tables of the pharmaceutical Diveses, or else seek new modes of subsistence. The only other alternative is to seek salvation at the hands of village "grannies," blackamoor "mammies," and fire-water-absorbing red men, all of whom, as is well known, are superhumanly and inherently endowed with the keeping of the most abstruse of Nature's secrets! The proprietary interest is given to purloining prescriptions from the medical profession; but the Indian and Negro are at least original if not palatable—they may not disguise acetanilid and nitro-glycerin compounds under catchy titles; they may prefer whiskey to cheap alcohol; but their remedies do possess the exclusive merit (to the average citizen) of being "direct and fresh from Nature's laboratory."

And, come to think of it, why should we abandon savage Nature for proprietary "Art," when the latter demands tolls that tunefully represent profits of from 500 to 50,000 per cent.? The gentlemen who purloin formulas are, to be sure, actuated only by the very best and æsthetic of motives. But then the majority (like ourselves) have not reached the high pinnacle of proprietary æsthetics, and their pockets are but modestly lined, hence it would appear more practicable to stick to poor Lo or the voodoo nigger. While we all know the broad humanity of the proprietary-medicine interest, and its desire to aid the "suffering public"—all of which leads to the expenditure of large sums for literature, fancy advertisements, and the hiring of oily-tongued agents,—would not the profession be able to retain to itself some reputation for philanthropy by sticking closer to the village granny and tag-alder bitters?—It's not fair the proprietary element should have it all.

We only wonder that the profession has not recognized these facts before, particularly as we have all absolutely suffered as the result of the philanthropy of the proprietary ilk, who flood our desks and tables with all sorts of nostrums bearing fancy, catchy, freaky, and un-philologic preparations—recently we were obliged to hire an individual to remove these accumulated evidences of liberality, and that, too, greatly to the detriment of the navigation of a neighboring water-way.

To be sure, there is always guarantee that the proprietary nostrum is combined in a most ethical manner; that it exactly contains what each agent says it does; and that its physiological and therapeutic effects—even though the remedy was discovered but yesterday—have been carefully worked out during a quarter of a century of experience at the hands of the most expert scientists, though the process of "proving" was necessarily held a profound secret. Nothing more should be required, if we are not content with the erudition of fetichism and superstition, pure and unadulterated — free from sordid aims and reasoning.

When we realize what an immense amount of capital has been tied up in educational institutions to a useless end, and how easy it is for philanthropy to rule the world and to cure all diseases, it seems passing strange that our boasted civilization has been taking us further and further away from the light; and we cannot be too grateful to our Missouri brother that he has led us from that "broad way which leadeth to destruction" into the narrow path which assures everlasting proprietary virtue. The only way that medicine can now become an exact science is through the *ipse dixit* of those philanthropic enough to start factories for the preparation of pharmaceutical nostrums —to add to the everlasting list of "*ines*," "*ides*," "*a's*," and "*o's*." Knowledge of chemical combination or therapeutic relevancy is superfluous. All the world can be-

come physicians, for "the Lord eddicates his doctors jest as he wants them to be eddicated," manifesting his will through vegetable womb-lifters, cod-liver oil soaps, disguised acetanilid tablets, and ox-brain solutions; and the *ides* and *ines* are direct revelations beside which the tablets in stone and the ten commandments are obsolete. Verily the millennium is at hand, and we hail with joy its prompt arrival. Long live Charlatanism!

CODEINE.

This alkaloid of opium has been well known to physicians and druggists for many years, and yet its therapeutic relations and value seem to be little understood. There appears to be a general feeling that it is a substitute for morphine—which is very far from being the truth; and as a sequence, complaints of inert or inactive character of the drug are quite the reverse of uncommon.

The fact is that pure Codeine is never in any degree a succedaneum for the narcotic alkaloids of opium, and in no sense does it represent the constituents of the drug from which it is derived. It is not even a certain hypnotic; and so far as any analgesic effect is concerned, it is utterly useless. There are a large number of remedies in the materia medica which are much more desirable than Codeine, and the attempted substitutions—for they are no less—that attach to it therapeutically have no more practical basis than that it is an opium derivative. This alkaloid, moreover, is usually exhibited in minute doses, under the supposition it is as potent as morphine, whereas as a matter of fact it has frequently been exhibited in doses of several grains—eight, ten, and twelve—without untoward effect.

It is possible also that the knowledge regarding the alkaloid is so far defective that no two preparations represent the same strength—this is a point upon which we have never been able to secure, even from those who are deemed experts, satisfactory information; and the United States Dispensatory for 1894 seems to hold the same idea, since it says:

> It is probable that pure Codeine is a very feeble alkaloid tolerated by the human system in very large doses. On the other hand, cases of severe poisoning have been published, and experimentors have claimed for it a very powerful influence upon the lower animals. As late as 1874, Doctor Myrtle reported a man almost killed by four grains of Codeine prepared by Messrs. Smith, of Edinburgh. . . . On the other hand, Doctor S. Weir Mitchell took five grains of Codeine without effect, save some nausea, slight gliddiness and cerebral heaviness, and a trifling acceleration of the pulse; whilst we have given Codeine prepared by Powers & Weightman, of Philadelphia, in doses of eight grains per day, without distinct effect. It is very evident that commercial Codeine has been, and probably still is, of varying composition, and the results frequently obtained have been produced by coherent alkaloids.

Finally, the Dispensatory adds that, on account of frequent contamination, care should be exercised as to the initial dose; but no effect can be expected from less than one grain of any kind of Codeine.

It is evident this drug needs more study and experimentation at the hands of both chemists and therapeutists.

SHOULD INSANE CRIMINALS BE EXECUTED?

Doctor Daremberg, the well known French practitioner and philanthropist, insists that it is folly to preserve the lives of insane criminals: such philanthropy, he holds, is at best but a mistaken one, and the moment an individual becomes a menace to society, the quicker he is placed beyond all power to do harm the better—a sentiment we heartily echo. He cites the case of a copying clerk whom he knew in his youth:

> The man had been in an insane asylum because he had, without the slightest reason or provocation, killed a neighbor in cold blood. His subsequent behavior in the asylum caused the guardians to think that he had recovered from his dangerous madness, and he was liberated. One day my father entrusted this man with a valuable medical manuscript, which had been lent by the Munich library. The clerk was to copy it, and we accompanied him to his own door in the Rue St. Jacques. We had hardly left him when we heard a noise, and, upon returning, found a dead man on the pavement, and the clerk in the hands of the police. Looking for the manuscript, we found it on a stone, where the clerk had placed it before he stabbed a harmless passer-by to death. Of course he was again sent to the asylum, where, about ten years ago, he killed the director. I do not know whether he is still alive, but there can be no doubt that such people should be put out of the world.

Formerly such individuals were chained like the wild beasts they are, but the superhumanitarian principles that make a hero of the sane murderer, a martyr of the rapist, and an idol of the sodomist, have changed all this. There appears to be nothing left in the way of protection save capital punishment. As Doctor Daremberg justly remarks, "insanity is no doubt very interesting, but its phases should only be studied where it can be rendered harmless."

EDITORIAL NOTES.

Index Medicus.—

The list of subscribers to the special fund up to October 8th, 1895, inclusive, is as follows:

New York State Library, per Melvin Dewey, Albany, N. Y.	$25 00
A. Vander Veer, M.D., Albany, N. Y.	25 00
Samuel B. Ward, M.D., Albany, N. Y.	25 00
Henry Hun, M.D., Albany, N. Y.	25 00
Milbank Johnson, M.D., Alhambra, Calif.	25 00
Medical Department University of Michigan, per Victor C. Vaughan, M.D., Dean, Ann Arbor, Mich.	25 00
Chas. O'Donovan, M.D., Baltimore, Md.	25 00
Wm. Osler, M.D., Baltimore, Md.	25 00
H. A. Kelly, M.D., Baltimore, Md.	25 00
L. McLane Tiffany, M.D., Baltimore, Md.	25 00
I. E. Atkinson, M.D., Baltimore, Md.	25 00
W. S. Halsted, M.D., Baltimore, Md.	25 00
Henry M. Hurd, M.D., Baltimore, Md.	25 00
Thomas S. Cullen, M.D., Baltimore, Md.	25 00
Henry D. Holden, M.D., Brattleboro, Vt.	25 00
Medical Society Kings County, per W. Browning, M.D., Brooklyn, N. Y.	25 00
F. W. Henkel, M.D., Buffalo, N. Y.	25 00
P. S. Conner, M.D., Cincinnati, Ohio	25 00
J. W. Elliot, M.D., Boston, Mass.	25 00
R. H. Fitz, M.D., Boston, Mass.	25 00
M. H. Richardson, M.D., Boston, Mass.	25 00
F. Forchheimer, M.D., Cincinnati, Ohio.	25 00
Cincinnati Hospital Library, Cincinnati, O.	25 00
Cleveland Medical Library, Cleveland, O.	25 00
Dudley P. Allen, M.D., Cleveland, Ohio	25 00
Henry K. Cushing, M.D., Cleveland, Ohio.	25 00
Wm. H. Humiston, M.D., Cleveland, Ohio.	25 00
El Paso County Medical Society, Colorado Springs, Col.	25 00
Colorado Medical Library Association, Denver, Colorado	25 00
H. O. Walker, M.D., Detroit, Mich.	25 00
Young J. Pentland, publisher, Edinburgh, Scotland	25 00
J. P. Johnson, M.D., Galveston, Texas	25 00
Bibliothèque Universitaire, Lille, France	25 00
Royal College of Surgeons, London, Eng.	25 00
British Medical Association, London, Eng.	25 00
Index Medicus Club, Louisville, Ky.	25 00
R. Newton Hawley, M.D. (Milwaukee Medical Society), Milwaukee, Wis.	25 00
J. H. Mills, M.D., Nashville, Tenn.	25 00
Orleans Parish Medical Society, per S. W. Deland, New Orleans, La.	25 00
S. E. Chaille, M.D., New Orleans, La.	25 00
John B. Elliott, M.D., New Orleans, La.	25 00
Edmond Souchon, M.D., New Orleans, La.	25 00
Rudolph Matas, M.D., New Orleans, La.	25 00
Fred H. Wiggin, M.D., New York City	25 00
G. T. Jackson, M.D., New York City.	25 00
J. S. Thacher, M.D., New York City.	25 00
John A. Fordyce, M.D., New York City.	25 00
New York Academy of Medicine, New York City	25 00
Geo. T. Elliot, M.D., New York City.	25 00
Willy Meyer, M.D., New York City.	25 00
Robert Abbe, M.D., New York City.	25 00
S. T. Armstrong, M.D., New York City.	25 00
L. Duncan Bulkley, M.D., New York City.	25 00
D. Bryson Delavan, M.D., New York City.	25 00
Alexander Lambert, M.D., New York City.	25 00
Robert F. Morris, M.D., New York City.	25 00
Frederick Peterson, M.D., New York City.	25 00
R. W. Taylor, M.D., New York City.	25 00
G. Gilman Thompson, M.D., New York City.	25 00
St. Lawrence State Hospital, Ogdensburg, N. Y.	25 00
Charles E. Sajous, M.D., Paris, France	25 00
Charles Richet, M.D., Paris, France	25 00
John B. Roberts, M.D., Philadelphia, Pa.	25 00
E. E. Montgomery, M.D., Philadelphia, Pa.	25 00
J. C. Wilson, M.D., Philadelphia, Pa.	25 00
William Pepper, M.D., Philadelphia, Pa.	25 00
DeForest Willard, M.D., Philadelphia, Pa.	25 00
S. Weir Mitchell, M.D., Philadelphia, Pa.	25 00
George M. Gould, M.D., Philadelphia, Pa.	25 00
H. C. Wood, M.D., Philadelphia, Pa.	25 00
Wm. W. Keen, M.D., Philadelphia, Pa.	25 00
J. William White, M.D., Philadelphia, Pa.	25 00
Library Pennsylvania Hospital, Philadelphia, Pa.	25 00
Wm. B. Van Lennep, M.D., Philadelphia, Pa.	25 00
Capt. V. Vischer, Philadelphia, Pa.	25 00
F. X. Dercum, M.D., Philadelphia, Pa.	25 00
John W. Crowskey, M.D., Philadelphia, Pa.	25 00
Howard F. Hansell, M.D., Philadelphia, Pa.	25 00
John H. Packard, M.D., Philadelphia, Pa.	25 00
Hobart A. Hare, M.D., Philadelphia, Pa.	25 00
Edward Martin, M.D., Philadelphia, Pa.	25 00
Quincy Public Library, Quincy, Illinois	25 00
Hunter McGuire, M.D., Richmond, Va.	25 00
John O. Roe, M.D., Rochester, N. Y.	25 00
S. H. Pinkerton, M.D., Salt Lake City, Utah	25 00
R. J. Hall, M.D., Santa Barbara, Cal.	25 00
Charles Wood Fassett, Secretary American Medical Publishers' Association, St. Joseph, Mo.	25 00
C. A. Wheaton, M.D., St. Paul, Minn.	25 00

San Francisco Medical Society, per D. W. Montgomery, M.D., San Francisco, Cal...	25 00
E. L. Trudeau, M.D., Saranac Lake, N. Y..	25 00
Henry L. Elsner, M.D., Syracuse, N. Y....	25 00
Syracuse Academy of Medicine, Syracuse, N. Y.....	25 00
Medical Department U. S. Army (10 copies), Washington, D. C.....	250 00
Library Surgeon-General's Office (2 copies), Washington, D. C.....	50 00
Medical Department U. S. Navy (2 copies), Washington, D. C.....	50 00
U. S. Marine Hospital Service (1 copy), Washington, D. C.....	25 00
	$2675 00

The Opium Habit.—

An exchange declares the Eastern penitentiary at Philadelphia has completely cured three opium *habitués;* one had used the drug for four, another for thirteen, and the third for fifteen years. They had been sentenced to serve various terms, and were put in cells and treated the same as the other prisoners. Of course they suffered, or their appetites kicked up a row, but at the expiration of ten days they were all right and felt better than they had for years. Our contemporary concludes, therefore, that the way to cure a bad habit is to stop it.

Common Sense.—

This is a very important attribute for the practitioner of medicine, and far more valuable than abstruse science; yet, as Professor Osler pertinently remarks, "it is rare, and usually in inverse ratio to the degree of education."

The aphorism ascribed to the Bard of Avon regarding too much learning is exceeding apropos to the pathology and therapeutics of the last two decades of the nineteenth century.

Suggestive.—

Doctor Crothers relates that of fifty-eight patients treated by him for inebriety, twenty-six were Keeley "graduates," and eleven more had received some other form of so-called "gold cure!"

Information Wanted.—

The editor of this journal is in receipt of manuscript without title or author, dealing with scrofulosis. He would be glad to learn the writer's name and residence.

Items and News.

Where's the "Tuppence?"—

Many years ago a certain man went from Jerusalem to Jericho, and happened with disasters that are, I hope, well known to all of us; and certain religious professors who found him half-dead on the road passed by on the other side. But one good Samaritan took him to an inn and paid the charges of the landlord for looking after him—in advance. Nowadays the priest and the Levite would have run, if convenient, to the nearest doctor and requested him to be the Good Samaritan, and would probably have vilified him, either publicly or privately, or both, if he did not at once drive off to the accident, whatever other claims he might have upon him at the time. The greater the profession of benevolence the greater the horror at the request of the doctor for that "tuppence." I doubt not that most members of our profession, indeed all, do their neighborly duty as well and as frequently as any other member of the community. The rub comes in where we are expected to act vicariously for any one who chooses to call upon us for this purpose. To such we may very well say: "Where is your twopence?" I make it a rule never to pay any attention to casual messages or urgency calls unless to my own patients, or when given by some one who is prepared to pay my fee. If we would only assert ourselves a little more, and let people understand that we must be paid for our services the same as any other profession, there would be less difficulty in obtaining our rights. We have done so much gratuitously in the past that people forget we have our bills, rent, rates and taxes to meet the same as others. In cases of emergency calls by police or any one else, a good working policy is to ask: "Where is the tuppence?"—Doctor B. Jones, in *British Medical Journal.*

The Power in Whooping Up.—

Apropos of the treatment of diphtheria: To such an extent has the public been informed on the subject, and such is the force of public opinion, that once the diagnosis of diphtheria is made, the treatment settles itself—antitoxin *must* be injected. The patient, represented perhaps by his relations or friends, is quite as likely to insist on the treatment as is the physician. The public mind has been as thoroughly educated in this direction as pictures and vivid descriptions can insure. Newspaper and magazine articles on the "great discovery" have been numerous; and all the technicalities of the

production, and all the details as to the uses and effects, of the new specific have been set forth with painstaking elaboration and precise attention to minutiæ, even to the reproduction of photographs of laboratories and of the manufacturers themselves.

We might pause to note the indecent haste to attain notoriety that has been exhibited by those physicians (scientists?) who have contributed such articles to popular magazines. Such haste is neither creditable to medicine nor of real utility to the laity.—Doctor J. P. Sutherland, before Massachusetts Medical Society.

Don't Mix Medicines.—

In compounding prescriptions in hot weather the physician should have a care concerning fermentable and decomposing mixtures. One of the commonest is a prescription containing digestives, such as pepsin, with bicarbonate of soda in starchy substances or syrups, which in warm weather are sure to ferment. It is much better to give such agents separately. Some of our commonest drugs mix badly with any agent. Cimicifuga precipitates in any liquid mixture sooner or later. Hydrastis mixes badly with any alkaline excipient, and strophanthus deposits its active principle at once in water.—*Chicago Medical Times.*

Perennial Flowers.—

A German chemist has recently traced the cause, or rather one of the causes, of flowers fading when dried for the herbarium, to the ammonia always present in the air. In order to obviate this, he presses his specimens between sheets of paper which have been previously saturated with a one-per-cent. aqueous solution of oxalic acid. The colors are said to remain vivid or delicate, like the fresh specimens, and to be truly beautiful. The acid might be used to advantage in the case of red and pink flowers, yet might change the blue ones. The experiment can easily be tried.—*Pacific Druggist.*

Mongrel Nomenclature.—

In a late number of the *British Medical Journal* the eminent Doctor Haig employs, unreservedly, "uricacidemia," a wonderful combination of two English words and a Greek suffix. Hereafter no one will be surprised to see crop up in medical literature such vocabulary beauties as whitebloodcorpuscleemia, grapesugaruria, eggwhiteuria, gallstoniasis, stomachguttitis, etc. Verily, the English language has lost nothing of the flexibility and adaptability of vigorous youth. —*Medical Standard.*

It is a Mistake.—

To pay so much attention to pathology and the causes of disease that therapeutics must be neglected. From the point of view of the invalid it is infinitely more important to know the remedy that it is to know the microbic or other cause of his disease.

In Re Antitoxin.—

It was first alleged that if the serum was employed sufficiently early, say the second day, the disease would be checked and the child saved. Koerte tells us he killed all his cases by his early treatment!—*Medical Press and Circular.*

Quintuple Birth.—

An Associated Press dispatch from Charlotte, Prince Edward Island, says Mrs. Alexander Campbell, of Montague, gave birth to five daughters on July 28. Her husband is a tailor and is in his eighty-fourth year.

Size of Drops.—

The size of drops delivered from a tube is determined not by the lumen of the latter but by the outside diameter, a fact to which Eschbaum has recently called attention.—*Pharmaceutische Centralhalle.*

Not Quoted in the Chicago Market.—

The smallest known species of the genus *Sus* is the pigmy hog of Australia. It resembles its larger brethren exactly in all but size, being not larger than a good-sized house-rat.—*Exchange.*

The Weapon of the Bee.—

When compared with the point of a fine needle, under a powerful microscope, the sting of the bee is hardly discernible.—The point of the needle appears to be about an inch in diameter.

Honors to Doctor J. Collins Warren.—

Jefferson Medical College, Philadelphia, has conferred the honorary degree of LL.D. upon this gentleman, the well known Professor of Surgery at Harvard University.

What Next?—

The "bicycle face," haggard and ashen, has been discovered by an English M.D.

A Pathognomonic Symptom.—

Belief in serum therapy is an infallible symptom of intellectual degeneracy.

Never—

Give a drug without a well defined reason for so doing.

Book Reviews.

THE COSMOPOLITAN. Price, 10 cents; $1.20 a year. Cosmopolitan Publishing Co., Irvington-on-Hudson.

Rudyard Kipling makes his last appearance as a teller of Jungle Stories in the October number; "Mowgli Leaves the Jungle Forever," and the curtain is drawn over one of the most charming conceits in literature. "The Greatness of Man," a plea for religion, is by Richard Le Gallienne. A very important paper on "State Universities" is contributed by Professor Ely. Among the story-tellers are Hopkinson Smith and Boyesen. Drake, Carter Beard, Osterlind, Denman and Kemble contribute illustrations to this number.

The *Cosmopolitan* announces that it will begin the publication in January of *The Agriculturist's Illustrated Magazine*, which will contain from sixteen to twenty pages by the ablest agricultural writers of the world upon subjects of importance to the agriculturist, horticulturist, and stock-growing interests.

MCCLURE'S MAGAZINE. Price, 10 cents; $1.00 a year. S. S. McClure, New York.

In the October issue Mr. Cleveland Moffett describes the labors of O'Donovan and Eakins in the making of a pair of equestrian statues of Lincoln and Grant. Mr. James R. Gilmore ("Edmund Kirke") tells how the office of the New York *Tribune* was armed against the mob that assailed it at the time of the New York draft riots. Another newspaper article is Mr. James Creelman's account of the London *Times*, its development, character, etc. Theodore Roosevelt writes on "The Closing of the New York Saloons on Sunday;" Cy Warman of "Riding Over an Earthquake in a Locomotive;" Governor Thayer gives an account of General Grant's abrupt removal from command at Pilot Knob and his as abrupt restoration. There are also new stories by Anthony Hope, Robert Louis Stevenson, Ian Maclaren, and Stanley J. Weyman, and a poem by Mrs. T. H. Huxley.

THE ECLECTIC MAGAZINE. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

This excellent epitome of foreign literature for October contains: "A Defense of Prayer," by Reverend W. Barry; "Jacob," a Comedy, by Katharine S. Macquoid; "Paying in Person;" "The Opportunity of Democracy," by W. H. Robinson; "The Spectroscope in Recent Chemistry," by R. A. Gregory; "In the New Zealand Alps," by E. A. Fitzgerald; "Our Village—Poor Neighbors," by E. B. Harrison; "On a Devonshire Trout Stream;" "Harnessing Niagara," by George Forbes; "The Present Condition of Russia," by Prince Kropotkin; "With Thomas Ingoldsby in Kent," by H. M. Stephens; "Miss De Maupassant," by C. E. Raimond; "Sunshine and Life," by Mrs. Percy Frankland; "After-Careers of University-Educated Women," by A. M. Gordon; "Stambuloff," by Henry Cust. There are the usual Foreign Literary Notes and Miscellany.

THE CENTURY. Price, 35 cents; $4.00 a year. The Century Co., New York.

With the October number this magazine closes its twenty-fifth year and fiftieth volume, but notwithstanding this rather venerable age it shows youthful vigor and a particular timeliness. There are several articles on the poet Keats; also several tributes to E. J. Glave, the explorer who died a few months ago in Africa. Professor Lombroso has an essay on "Nordau's Degeneration: Its Value and Its Errors." There is a second paper by Miss Bicknell on "Life in the Tuileries under the Second Empire;" "Sloane's "Life of Napoleon" reaches the period of the execution of the Duc d'Enghien. Anna Bowman Dodd writes of "A Cruise on the Norfolk Broads." Besides the concluding chapters of Marion Crawford's dramatic novel, "Casa Braccio," the fiction of the number is contributed by G. A. Hibbard, R. McE. Stuart, and G. W. Edwards.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

In the October number Doctor Andrew D. White concludes his papers upon the "Warfare of Science;" Herbert Spencer writes of "Man of Science and Philosopher;" "Trout Culture" is by Fred Mather; "Recent Recrudescence of Superstition" is by Professor E. P. Evans; Professor M. Foster writes of "Thomas H. Huxley." "Pleasures of the Telescope" is by Garrett P. Serviss; "The Life of Water Plants," by M. Büsgen; "Studies of Childhood," by James Sully; "Hunting with Birds of Prey," by M. E. Blanc; "War as a Factor in Civilization," by Charles Morris. There is a "Sketch of David Hosack," and the usual "Editor's Table," "Literary Notes," etc.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

Mrs. Ward's serial, "A Singular Life," is concluded in the October issue. There are

further installments of Gilbert Parker's "Seats of the Mighty," and Charles Egbert Craddock's "Mystery of Witch-Face Mountain;" "The Genius of Japanese Civilization" is by Lafcadio Hearn; "An Architect's Vacation," by R. S. Peabody; "The Countess Potocka," by Susan Coolidge; "The Wordsworth Country on Two Shillings a Day," by Alvan F. Sanborn; "Lookout Mountain," by Bradford Torrey. The poems of this issue are by J. B. Tabb and Michael Field.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The most notable presentations of the October issue are: "The University of Chicago," by Robert Herrick; "The Lamp of Psyche," by Edith Wharton; "American Posters," by H. C. Bunner; "The Amazing Marriage," chapters XXXVII–XXXIX, by George Meredith; "Stevenson's Home Life at Vailima," by Lloyd Osbourne; "The Art of Living," by Robert Grant; "Domesticated Birds," by N. S. Shaler; "Mr. Huxley," by G. W. Smalley; "American Wood-Engravers — William Miller;" "The Point of View."

THE OPEN COURT. Price, 5 cents; $2.00 a year. Open Court Publishing Co., Chicago.

Captain Cornelius Gardener, in No. 422 of the *Open Court*, gives a description of the methods and results of Pingree's Potato Plan in Detroit, which should be of high interest to philanthropists and economists. A picture of the first historical devil, found on an Assyrian bas-relief, is also given in connection with a paper by Doctor P. Carus on primitive Semitic myths. Lawyers and students will be repaid by the perusal of an obituary notice on A. H. Post, the founder of ethnological jurisprudence.

THE PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 a year. Fowler & Wells Co., New York.

Contents for October: "Count Leo Tolstoi," by Victor Yarros; "How Three People Did Europe Afoot," by George C. Bartlett; "Only a Question of Time," by C. T. Parks; "Phrenological Biography," by Charlotte Wells; "Brain Diameters," by George Cozens; "Is Cheirosophy a Science?" by Maria Gambrill; "Child Culture," by Nelson Sizer.

THE MONTHLY ILLUSTRATOR AND HOME AND COUNTRY. Price, 25 cents; $2.00 per year. The Monthly Illustrator Publishing Co., New York.

Among the popular illustrated magazines of America, *Home and Country* and *The Monthly Illustrator* occupy each a field peculiarly its own. The two have now been combined under the blended title, and the October number furnishes evidence that the features of both are to be retained—perhaps even improved upon. Especially is this true with regard to illustrations, of which there are nearly two hundred in the current issue.

REVIEW OF REVIEWS. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The special features of the October issue are: "Religious Journalism and Journalists," by G. P. Morris; "The Carnegie Libraries," by W. B. Shaw; "Matabeleland," by Sir Frederick Frankland; "The Madri—Politics and Social Life of the Native Venezuelan," by Louis Becke and J. T. Fitzgerald; "The Civil Service Problem of Australasia," "The Manitoba School Question," by the Attorney General of the Province.

OUTING. Price, 25 cents; $3.00 a year. The Outing Publishing Company, New York.

Notable features of the October issue are: "A Bit of Blue Ribbon," by Sara B. Kennedy; "In Rugged Labrador," by R. G. Taber; "Héro," by T. G. Randall; "Guns and Shooting," by E. W. Sandys; "The Great Dismal Swamp," by A. Hunter; "Football," by Walter Camp; and "Moose Hunting in New Brunswick," by E. P. Rogers. The editorial and record departments are especially interesting.

AMERICAN NATURALIST. Price, 35 cents; $4.00 a year. The Edwards, Docker Co., Philadelphia.

The October number contains: "The First Fauna of the Earth," by Joseph F. James; "Deviation in Development Due to the Use of Unreliable Seeds," by J. C. Arthur. There are the usual departments of Recent Literature, Editor's Table, Geology and Paleontology, Botany, Vegetable Physiology, Zoology, Entomology, Embryology, Psychology, Anthropology, Scientific News, etc.

LITERARY NOTE.—Marion Crawford is writing for the *Century Magazine* a series of papers on Rome and the Vatican, for which André Castaigne is drawing the illustrations; these articles will describe unusual features of the Sacred City, and the pictures will include some remarkable restorations of classical scenes. Captain Alfred T. Mahan, the great naval tactician, will also contribute a series of four studies of the naval engagements upon which the fame of Admiral Lord Nelson is founded; and Henry M. Stanley a paper on Africa, to be supplemented by articles made up from the diary and journals of the late E. J. Glave, who died a few months ago on the Congo.

Therapeutic Brevities.

Saw Palmetto and Pichi in Stricture of Urethra.—D. A——, aged 30, complained of a stricture of eight years' standing, doubtless the result of cauterization for gonorrhœa. Whenever his urine became acrid from excess of urates or stimulating foods or drinks, he found it almost impossible to void it, and required nearly ten minutes to accomplish a single evacuation. On one occasion, after a thorough use of non-irritating cathartic pills, he had been able to make a stream full and free for a day or two, after which the former strictured condition again obtained. I found great tenderness, irritation and induration of the prostate gland, and perineal pain reflected from the seat of stricture. An attempt to pass a No. 3 or 4 bougie proved perfectly abortive, nor would the stricture yield to persistent pressure against the resisting tissues. The bougie passed freely and painlessly along the urethra until the membranous portion was reached, when, with a painful spasm, its further progress was instantly and effectually stayed.

A brief course of tentative treatment corroborated my diagnosis, and I proceeded to treat him as follows: A narrow strip of irritating plaster was held in contact with the shaven surface over the prostate by means of a neatly adjusted perineal bandage; fresh plaster was applied from time to time until pustulation and suppuration followed its application. Compound podophyllin pills were given short of catharsis until there was visible improvement in the physical and chemical condition of the urine, after which I put him on elixir of Saw Palmetto and Pichi. Also one-half teaspoonful every six hours of a mixture of tincture of stillingia (2), fluid extract digitalis (1), tincture honey bee (½), and simple syrup to make 16 parts. Under this treatment the improvement was marked, and in two weeks a No. 4 bougie could be readily and painlessly passed, and at the close of the third week there was no appreciable impediment to the passage of the urine.—Doctor Rutherford, in *Virginia Medical Monthly.*

Lactic Acid in Epithelioma of Face.—In November last I was called to see a patient, aged 65 years, who for five or six years had a sore situated on the cheek, and that within three months had begun to develop very rapidly. Prior to this it had gone through the usual characteristics of a slow-growing epithelioma. The ulcer was unusually thickened and indurated, its cavity about the size of a silver dollar, fully two-thirds of the surface occupied by an elevated, indurated, thickened, characteristic wall. Remembering Von Mosetig Moorhof's declaration that Lactic Acid has the power of attacking and destroying cancerous growths without injuring healthy tissues, I concluded to resort to this agent, and accordingly had it prepared in the form of a paste along with silicic acid, and of a strength of about fifty or sixty per cent. Patient suffered very little pain from this; indeed, at no time was the suffering very acute. At the end of a week the strength of the paste was increased, and the application continued every day. Soon the surface of the sore began to granulate; the walls broke down like magic; and when the patient was discharged, in the succeeding January, there remained only a perfectly clean cicatrix, smooth and somewhat reddish, about the size of a penny. Note that in six or seven weeks from the first application the man was entirely well.—Doctor I. M. Bloom, in *Journal of Cutaneous and Genito-Urinary Diseases.*

Brewers' Yeast in Diabetes.—At the French Congress of Internal Medicine, Cassaet professed to have obtained good results in diabetes by the administration of brewers' Yeast in a daily dose of 750 grains, although the substance could not be continued sufficiently long on account of the practical difficulty in summer of preventing acetous or putrid fermentation. It was taken readily by the patients, the immediate effect being the expulsion of a very large quantity of gas by eructation; then, in the course of the first or second day, extremely fœtid diarrhœa with abundant gas. After a few days tolerance is established, the general state of the patient improves: appetite returns, strength increases, and pain diminishes. The weight of the three patients in whom the treatment was tried increased three, five, and eight pounds respectively after the Yeast had been administered for a fortnight—a gain particularly remarkable, inasmuch as one was phthisical as well as diabetic, and another had diabetes of the gravest type. On discontinuing the treatment, loss of weight was soon observed. The proportion of urea in urine remained stationary or increased; the proportion of sugar diminished in one case by three-fourths and in another by two-thirds in the fortnight. —*Times and Register.*

Thyroid in Therapeutics.—Jorfida made use of the Thyroid gland in five cases of parenchymatous goitre, in two of which the tumor

entirely disappeared, and in the others a notable reduction in size ensued. He administered from twenty-eight to forty-five drachms, extending over from nineteen to forty-three days. In four of the five patients there was a diminution of body-weight.—*Il Policlinico.*

Doctor Ferdinand Winkler carefully reviews the literature of Thyroid, and remarks the noticeable results in myxœdema are: Diuresis; diminution of the myxomatous swelling; lessening of body-weight; disappearance of weariness, stiffness, and apathy. In obesity notable diminution of body-weight has been obtained, and may even be more marked than when dietetics alone are relied upon; the somatic and psychic phenomena of cretinism are often markedly benefited; in tetany good results have been claimed by Gottstein; in exophthalmic goitre and acromegaly it apparently produces no good results; a few cases of psoriasis have been benefited, but lichen planus, lupus, eczema, urticaria, prurigo, and acne rosacea are not influenced; Menzies found great benefit in six cases of rupia syphilitica, and Abraham a marked improvement in two patients suffering from leprosy.—*Centralblatt für die Gesammte Therapie.*

Taka-Diastase.—Doctor Ferdinand Lascar recalls the fact that diastase has an action upon starch identical with ptyalin. Diastase is contained in a greater or less extent in the different extracts of malt, but in them its utility as a starch-converting agent will always remain a limited one. The diastase now made by Takamine is a dry powder, tasteless, of no perceptible odor, and powerful enough to convert one hundred times its weight of starch into a soluble condition. Doctor Lascar finds that it will convert fifty per cent. more than is claimed for it. One of the peculiarities of this product is the rapidity with which the conversion takes place, four minutes being sufficient so fully to produce the change that neither iodine or the microscope can detect unconverted starch. In the making of the tests, as well as in the manufacture of the product, heat should be guarded against, as it easily destroys the action of diastase. The field of usefulness of this product is not alone in infant-feeding, but as well in the amylaceous dyspepsias of adults, which are by no means infrequent.—*Therapeutic Gazette.*

Value of Chloral.—It is unfortunate this drug has been so distinctly labeled "hypnotic and sedative," as this action has thrown into the shade the marked power possessed of relaxing spasmodically contracted unstriated muscles and dilating peripheral vessels. These qualities suggest the employment of Chloral hydrate in several conditions where hitherto it has been little thought of. Associated with iodide of potassium it is of service in bronchial asthma; and Doctor J. Pal has used it in the form of enemata (fifteen to twenty grains in each) for checking hæmoptysis; here it is assumed to act by the revulsion which it produces in dilating the cutaneous vessels. On the same principle it is employed by Doctor Cherchevsky, in small doses daily, to counteract the coldness of the feet and hands which is so disagreeable a symptom in certain cases of anæmia, neurasthenia, etc.; he also employs its vaso-dilator function in the treatment of aortic aneurysm, where even a dose of two or three grains combined with iodide of potassium assists the action of the latter and keeps up a certain degree of peripheral vascular relaxation. —*The Practitioner* (London).

Curetting Cornea in Pterygium.—Raise the ptergyium from its position with the fine-toothed forceps; detach by shaving the cornea with a small bistoury, or excise by a single cut of the scissors, or by two converging cuts, one superior and one inferior. Now fix the eyeball with forceps, and very carefully and vigorously curette the corneal wound, commencing at the summit. By this method the cornea is completely cleaned, recovery takes place promptly, with no cicatricial opacity and no scar to be eliminated, which too frequently leaves a cloudiness of the cornea. Careful and vigorous curetting of the cornea should take the place of the galvano-cautery; it disinfects the entire denuded surface as well as any other method, and has the advantage of leveling it exactly and not destroying healthy portions of the organ. A simple conjunctival autoplasty by simple sliding may be performed. A few small liberating incisions with scissors enable one, if necessary, to free tense portions which are drawn by the sutures.—Doctor Deschamps, in *Annales a'Oculistique.*

Thyroid in Myxœdema.—Doctor Shurly, of Detroit, at a recent meeting of the American Laryngological Association, related a case in which, some fifteen years ago, Doctor T. A. McGraw, for the relief of goitre, extirpated the whole thyroid gland in a boy sixteen years of age. Three or four years later Doctor Shurly found the vocal cords and arytenoids normal in movement, but defec-

tive in tension. From this time on the patient gradually acquired myxœdema; his mental faculties had not developed to any extent. For three years now he has been taking Thyroid extract continuously; tension of the vocal cords is much better, and his mental faculties are somewhat improved although the mind acts very sluggishly. The profession should use its influence against extirpation of the whole of the thyroid gland, in the light of our present knowledge.—*American Journal of the Medical Sciences.*

Menthol in Diphtheria.—Kastorsky reports thirty-seven cases of diphtheria treated and cured by painting with a ten-per-cent. alcoholic solution of Menthol; marked improvement in the general condition was invariably noticed from the beginning of the treatment. The paintings, by means of a piece of cotton-wool, were usually carried out three times daily, and in some cases a single free application was followed by complete disappearance of false membranes within two days. The same simple method was invariably practiced by the author in numerous cases of anginas of various forms, and by Tritovsky in a group of cases of scarlatinal diphtheria. The paintings are said to be painless and quite harmless.—*The Lancet* (London).

Œnothera Biennis.—Evening Primrose is a very valuable remedy for distress after eating, and for diarrhœa and dysentery, especially in children.

About four months ago a man 65 years old, troubled with severe pains in his stomach after meals for over two years, solicited relief. I gave him Primrose, and in about an hour he was free from pain and wanted to know what he could eat, declaring he had dieted so long and eaten so little he was nearly starved. I told him to eat anything he liked, but take the medicine in a little water after each meal. He has never been troubled with stomach-ache since.—Doctor D. L. Hurd, in *Chicago Medical Times.*

Teaching Children to Talk Correctly.—If the proper effort is made in children from two to five years of age, it is in no way difficult to correct defective pronunciation. The fault usually lies in the necessity of the child's learning how to correctly pronounce certain sounds which to him seem to be more or less difficult or which have been incorrectly learned. A little practice on consonant sounds will sometimes correct many defects. The idea that "tongue tie" is to blame for defects of speech is usually erroneous It is surprising how quickly a little methodical education will permanently correct defects of speech, and this is almost equally true of stammering.—*Chicago Medical Times.*

Lamium Album.—Florain declares the blossoms of this plant constitute a hæmostatic of the first order. The remedy is efficacious in bronchial and uterine hæmorrhage where ergotin, tannic acid and the like have been used without success. In metrorrhagia the syrupy extract of the blossoms was used.

One part of the tincture to five parts of syrup and two-and-a-half parts water, is advised in half-teaspoonful or coffeespoonful doses, every half-hour until the internal bleeding ceases, after which a tablespoonful should be given every four hours until all the symptoms have disappeared.—*Medical Standard.*

Severe Epistaxis.—Severe bleeding from the erectile tissues of the nose is best checked by positive interstitial electrolysis, which can be employed whether the hæmorrhage is from a small or from a large area. Silver or copper needles are most efficacious. The current ought to run from sixteen to twenty milliampères, and each séance last from eight to ten minutes. In exceptional cases three or four sittings may be necessary. Hæmostasis can be brought about without bad results, though there exist between this region and the brain important vascular relations.—Miot, in *Revue Internationale de Rhinologie.*

Post-Partum Hæmorrhage.—Try, first, external stimulation, then bimanual stimulation: Second, ice internally and externally; throw ether on abdomen: Third, handkerchief soaked in vinegar squeezed dry at fundus of uterus: Fourth, inject hot water, 120°: Fifth, electricity: Finally, tampon uterus with gauze.

It is rare one is required to go farther than combined internal and external stimulation. The intra-uterine gauze tampon will always stop hæmorrhage, but should never be used except as a last resort.—*Canadian Practitioner.*

Fallacies.—A writer in the *American Journal of Pharmacy* points out the fallacy of the oft-repeated statement that lithic urate is more soluble than any of the urate salts, and therefore lithia-water is suitable to gouty patients and others who suffer from a superabundance of lithic acid; also the erroneous

assumption that the exhibiting of chlorate of potassium in blood poisoning will oxydize and destroy the poison in the blood. The fact is, as any chemist knows, that in an alkaline solution like the blood, chlorate of potassium is practically stable and consequently inert.—*Western Druggist.*

A Rational Aphrodisiac.—Quackish things in this line constantly cropping up, determines me to mention a tonic combination which, properly used, will not fail to benefit cases rightfully requiring such treatment: Strychnine sulphate, one grain; phosphorus, pure, one-half grain; atropine sulphate, one-third grain; resin cannabis, two and one-eighth grains. Make 100 pills, and give one or two from three to six times a day as required. When once an effect is produced they should be given less frequently.—W. C. Abbott, in *Texas Courier of Medicine.*

Circumcision.—I wish to enter a protest against the custom of universal and indiscriminate circumcision of male infants. It should be the duty of the attending physician to reflect the prepuce of all male children when they are a month old, relieve the corona glandis of the smegma present, anoint it with olive oil or vaselin, and replace the foreskin. This should be repeated two or three times a month by the mother, and the parts cleansed.—H. E. Tuley, in *Archives of Pediatrics.*

Jaundice after Male-Fern.—Grawitz has frequently observed jaundice to follow the administration of male-fern; the active agent in producing this is filicic acid, and as this is more readily absorbed when dissolved in fatty oils, he questions the wisdom of giving male-fern with castor oil. He also concludes that it is dangerous to give it to patients with hepatic cirrhosis, and quotes three such cases where the dose was followed by fatal results. —*Glasgow Medical Journal.*

Boils in the Gouty.—Among gouty persons who are attacked with successive crops of boils, but who have neither diabetes nor albuminuria, extract of Colchicum in quantities of from half a grain to two-thirds of a grain a day gives favorable and sometimes surprising results. As a local treatment daily applications of a strong tincture of Camphor are advised; the furuncles should also be covered with pieces of Vidal's red plaster.—M. Brocq, in *Lyon Médical.*

Scarlatina.—A writer in *La Semaine Médicale* recommends chloral for calming children suffering with this malady. It is a drug that is generally excellently borne by children, and a well known rough method of calculating the dose is to give one grain for every year of the child's age, up to ten years. The syrup should be prescribed, and given with soda-water or lemonade.—*The Practitioner.*

Substitute for Iodoform.—The following will be found as efficacious as iodoform in the dressing of wounds:

℞ Powdered camphor, 4 parts.
Bismuth subcarbonate, 4 parts.
Sulphur, 24 parts.

—*Medical Week.*

Drugs Contra-indicated during Pregnancy.—At the head of dangerous substances for the pregnant woman may be placed sodium salicylate, ergot, salicylic acid, and salol; then come purgatives, antipyrin, acetanilid, sulphonal, and cocaine.—M. Huguenin.

Arsenic in Sarcoma.—In a case of giant-celled sarcoma, from five to ten pills containing one-twenty-fifth of a grain of Arsenous acid were given every day for two years, with a complete cure as the result.—*New York Medical Times.*

Quinine for Ulcerations.—In simple or infectious ulcers a simple wash of a one-per-cent. solution of the sulphate of Quinine produces most excellent results.—*Lyon Médical.*

Rheumatic Arthritis.—An excellent application is of a cloth wet in a strong solution made by dissolving salt in boiling vinegar.—*Review of Medicine.*

Antitoxin.—The universal verdict concerning antitoxin seems to be that the treatment is worse than the disease.—*Medical Brief.*

Furuncles.—A Chloral solution kept constantly applied to a boil is said to be of great advantage.—*Exchange.*

Nuclein.—This gives prompt and decided results in malarial fever.—Doctor Wilson, in *Southern Clinic.*

Medical Progress.

Renal Pathology.—Two interesting contributions on this subject appeared recently in the *Wiener Klinische Rundschau*, from the pens of Semmola and Freund. It has been held that the albuminuria of renal diseases arises from disturbance of the glomerular circulation, or structural changes in the kidney tissues generally, tubules as well as glomeruli. Semmola argues that the primary change is in the proteids of the blood plasma becoming more or less diffusible; he founds this opinion on the results following the experimental injection of egg-albumen, and holds that this produces not only albuminuria, but other phenomena seen in Bright's disease, such as albuminuric retintitis for instance, and that these results are all due to the circulation in the blood of a so-called toxalbumen. It is certainly a fact of considerable interest that the repeated subcutaneous injection of egg-albumen should, in seven or eight weeks, produce changes of the retina and optic disc; but the real point is whether the retinitis is not due to the secondary effects produced by the damaged kidneys, rather than to the presence of the albumen in the circulation. Freund details his own experience—that the proportion of globulin to albumen in the blood-serum is as one to two, or even as one to three,—but does not regard this as specific of Bright's disease, as he found somewhat similar proportions in pernicious anæmia. He also discovered that the coagulation temperature both of blood-serum and of the serous exudations in Bright's disease is higher than that of normal serum. Finally, he experimented on the diffusibility of the serum in seventeen cases of chronic parenchymatous nephritis, with the result that, although the blood-serum underwent changes, such scarcely afforded evidence sufficient to establish the view that morbus Brightii is primarily a blood disease.

The observations of Shäfer and Oliver on the physiology of the supra-renal bodies (*Journal of Physiology*) throw new light on Addison's disease. It was found the supra-renal bodies elaborate a substance which has a very powerful action on muscular tissues, and more especially on the muscular coat of arteries; in very small doses it causes an enormous heightening of the blood-pressure, dependent upon contraction of the peripheral vessels, due to a direct action of the substance on the muscular coat, and not to any action on the medullary vaso-motor centre; it also acts directly on the heart, producing augmentation and acceleration, provided the vagi are divided. On the voluntary muscles its action is such that the period of contraction is slightly, and the period of relaxation greatly, prolonged. On respiration more marked effects are obtained in rabbits than in dogs; in the former the respirations are temporarily arrested, in the latter they are rendered shallower. The active principle of the supra-renal substance is only found in the medullary portion of the gland, and its activity is not destroyed by dilute mineral acids, by boiling unless very prolonged, nor by peptic digestion; alkalies, however, diminish its potency. In cases of Addison's disease, no physiological action was obtained from the extract of the diseased capsules. It is thus clear that these glands have an internal secretion, and it is possible that the phenomena of Addison's disease are entirely or in part due to the absence of this active principle. The muscular and circulatory weakness would at any rate thus receive an explanation. As yet no very striking therapeutic success has been achieved in Addison's disease by the injection of supra-renal extract, and in fact it is remarkable that it is only in myxœdema that good and striking results have been obtained by the use of animal extracts. This failure suggests that in other maladies, such as diabetes, Addison's disease, etc., there must be some other factor at work besides the deficiency of a normal internal secretion.—*The Practitioner.*

Late Suppers.—The old tradition that to eat anything just before going to bed was sure to produce indigestion and render sleep impossible, is now happily exploded. It is not good, as a matter of fact, to go to bed with the stomach so loaded that the undigested food will render one restless, but something of a light, palatable nature in the stomach is one of the best aids to quietude and rest. The process of digestion goes on in sleep with as much regularity as when one is taking violent exercise to aid it, and so something in the stomach is a very desirable condition for the night's rest. Some physicians have declared, indeed, that a good deal of the prevalent insomnia is the result of an unconscious craving of the stomach for food in persons who have been unduly frightened by the opinion that they must not eat before going to bed, or who have, like many nervous women, been keeping themselves in a state of semi-starvation.

Nothing is more agreeable on retiring for the night than to take a bowl of hot broth, like oatmeal gruel or clam soup. It is a

positive aid to nervous people, and induces peaceful slumbers. This is especially the case of cold winter nights, when the stomach craves warmth as much as any other part of the body. Even a glass of hot milk is grateful to the palate on such occasions, but a light, well cooked gruel is better, and in our climate, during the cold months of winter, should be the retiring food of every woman who feels, as many do, the need of food at night.—*Canada Lancet.*

Epithelioma Following Skin-grafting.—At a recent meeting of the New York Pathological Society, Doctor E. K. Dunham presented a woman of 53, in whom an adherent cicatrix, formed in 1872, had broken down, and an ulcer formed which never healed. Last year this ulcer was thoroughly scraped, and three months later, while granulating, was grafted with skin. Thirty days thereafter she was discharged "cured," all of the grafts having taken except one small spot. In February, 1895, she was readmitted, the ulcer having reopened, being also covered with unhealthy granulations. A portion was excised for examination, and presented an admixture of spiculæ of bone and epithelium, some in nests and some containing pearl bodies.

Doctor Ferguson thought it fairly common for such epithelial tumors to follow quite a number of years after the injuries; chronic ulcers on the front of the leg became epitheliomatous in many individuals. This statement, he said, could probably be verified by the records of any of our hospitals.—*Medical Record.*

Proof of the Value of Vaccination.—Scotin, of Russia, noting that an epidemic of smallpox was approaching the district under his charge, personally examined every child under fourteen years of age. Seventy-five were said to have been vaccinated, but no scars were visible; 424 had never been vaccinated. The smallpox arrived and a widespread although not very fatal epidemic resulted. Of the 1055 "vaccinated" children, only 16 contracted the disease; of the 75 "doubtful," 35 suffered; of the 434 "unvaccinated," 244 caught the disease. In other words, the unvaccinated suffered to an extent forty-five times as great as the vaccinated.

Further, it was observed that in 189 families all the children were unvaccinated, and in these families if one child sickened with the smallpox the disease spread, with only seventeen exceptions, to every other child in the house. On the other hand, in houses where some children were vaccinated and some were not, the disease without exception attacked the latter, and the former escaped.—*The Lancet* (London).

A New Symptom of Cancer.—A woman, aged 48, suffered from cancer of the stomach; the disease had gone through a long period of latency. She presented on each cheek a patch of wine-red discoloration formed by the dilatation of the superficial venules, that showed out sharply against the pale yellow of the surrounding skin. On the strength of this symptom alone I was able to make diagnosis of probable cancer at a time when there was yet no other manifest sign of this affection. Such superficial varicosities on the cheeks are a valuable help to the early recognition of certain cancers, and I have found them in about two-thirds of the cases which have come under my observation; they are particularly frequent in cases of epithelioma of the stomach and uterus, but less common in malignant diseases of other organs.—Doctor Bogdan, in *British Medical Journal.*

Aneurysm of the Hepatic Artery.—Mester reports the case of a man of 42 who was kicked in the abdomen by a horse, and who experienced pain in the hypochondrium, intermittent icterus, vomiting of blood, and passing of fresh or altered blood by rectum. The diagnosis was ulcer of the duodenum. Laparotomy failed to reveal seat of hæmorrhage, nevertheless gastro-enterostomy was performed, the patient dying a few days later. Autopsy showed a spurious aneurysm of the right branch of the hepatic artery, in the liver tissue and communicating with the right branch of the hepatic duct.

Analysis of the nineteen cases previously reported shows that the diagnosis is never made during life, the condition being mistaken for ulcer of the duodenum or gallstone.—*American Journal of the Medical Sciences.*

To Practice Deep Breathing.—Stand erect, the feet separated, the right slightly in advance; shoulders and head in natural position; hands lying lightly on the abdomen, the fingers pointing to the umbilicus—compliance with this rule enables the person to use the abdominal as well as the pectoral muscles in respiration. Empty the lungs of air, then close the mouth, inhale slowly through the nostrils, using abdominal as well

as chest muscles—the lungs thus receive the utmost possible amount of pure oxygen, and the muscles have exercise. Hold the breath as long as possible, and meanwhile use the ordinary calisthenic exercises—never exercise except the chest is well expanded with air. Exhale slowly, enunciating the vowel sounds as the air passes the lips.—*Annals of Hygiene.*

Empyema of Frontal Sinus.—It is not easy to diagnose an empyema of the frontal sinus attended with a bulging backward and downward of the orbital plate. Catheterism through the nares is most practicable, but this maneuvre is extremely difficult in the normal state, though simple and effective when the sinus is distended. Amaurosis and amblyopia are present in certain cases when the pus takes a backward direction and presses on the optic nerve as it enters the orbit. Pain is constant, the visual field is narrowed, and the disturbances of all the ocular functions are extreme. In all these cases one should first endeavor to drain through the nose, but if this fails, resort must be had to the trephine, though this leaves a scar.—G. Martin, in *Annales de Médecine.*

Priapism in Leukæmia.—Priapism suddenly appeared in a man of 42, without apparent cause. After two months the erection slowly subsided, leaving complete loss of sexual feeling, that never returned. At this time leukæmia was easily recognized by the greatly enlarged spleen and the condition of the blood—4,080,000 red to 960,000 white corpuscles. Six months later the patient died. It was found that the cavernous bodies had been the seat of extensive white thrombi, which had been followed by connective-tissue hypertrophy and induration, thus giving a mechanical explanation of this rare and hitherto obscure symptom.—*Zeitschrift für Klinische Medicin.*

Sea Air in Tuberculosis.—M. Lalesque gives the following results: Prophylactic action, fifty cases, fifty recoveries; curative action, 170 cases,—in the first stage seventy-three cases, twenty-two recoveries, thirty-nine ameliorations, twelve aggravations or deaths,—in the second stage thirty-seven cases, one recovery, twenty-four ameliorations, twelve aggravations or deaths,—third stage sixty cases, four recoveries, twenty-one ameliorations, thirty-five aggravations or deaths. He observes that the sea air, in common with that of mountains, is notable for its purity.—*American Journal of the Medical Sciences.*

Tongue-Traction Method Applied to Birds.—Doctor Souloumiac de St. Agnant publishes in *La Tribune Médicale* a rhyme in praise of Laborde's tongue traction method as successfully applied in the case of a pet sparrow which had fallen into the water, and was revived by making rhythmic tractions of the tongue.

La Médecine Moderne remarks that this is not the first time the method has been successfully applied to birds, as Doctor Raffegeau, of Verinet, thereby revived a hen which was apparently dead from exposure to severe cold.—*Dominion Medical Monthly.*

Respiratory Capacity.—Enlarged breathing capacity is desirable for many reasons. It not only insures an abundant supply of oxygen—which may be called its direct effect—but, indirectly, it produces results of great æsthetic value. It deepens and broadens the chest, causing the figure to become more erect, the step more elastic and vigorous, and the carriage of the body more pleasing and graceful.

What the Tongue Indicates.—A white tongue denotes a febrile disturbance; a brown, moist tongue—indigestion; a brown, dry tongue—depression, blood poisoning, typhoid fever; a red, moist tongue—inflammatory fever; a red, glazed tongue—general fever, loss of digestion; a tremulous, moist, and flabby tongue—feebleness, nervousness; a glazed tongue with blue appearance—tertiary syphilis.

A Telling Blow.—Another bulwark of bacteriology is gone. The primary postulate upon which the fledgeling science chiefly rested, was that a specific germ causes a specific disease. Now, recent investigations show that so-called specific germs may be found anywhere in the body, without regard to the nature of the lesion, if their natural pabulum, dead tissue, exists.

Tabes Dorsalis.—If a person has paroxysmal vomiting and complains occasionally of violent rheumatoid pains in the legs, examine most carefully for tabes. You will frequently be surprised at the ease with which you can make the diagnosis.—Doctor Hirt.

The Medical Age.

VOL. XIII. DETROIT, OCTOBER 25th, 1895. No. 20.

Original Articles.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.*

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S ARMY.

(*Continued from page 585.*)

VI. THE AUSTRO-HUNGARIAN ARMY.

In peace the Sanitary Corps consists of the headquarters and twenty-six sections; in war, in addition, there are field and reserve sanitary sections formed upon "cadre" furnished from the peace establishment, and sanitary sections from the hospitals of the order of Teutonic Knights.

Each Sanitary Section is assigned to a garrison hospital, and is known by its number, which is identical with that of the military division to which it is attached. The Sanitary Corps is commanded by a special corps of non-medical officers, eighty-three in number, and comprises besides 2834 men; in war it embraces 400 officers and 21,200 men.

Military Sanitary Establishments† for the reception and treatment of the sick and wounded, are divided into: Permanent Sanitary Establishments, consisting of the garrison hospitals and branches, troop hospitals, infirmaries, military bathing and water-cure establishments, and fortress hospitals; and Field Sanitary Establishments, consisting of divisional sanitary establishments, field hospitals, field infirmaries, reserve hospitals (on the theatre of war), halting-places for the wounded on the line of march, and field ambulances (railway, ship-ambulances, etc.). In the field sanitary establishments may also be included the reserve hospitals exterior to the theatre of war, the reserve hospitals and convalescent establishments provided by patriotic societies or private individuals, and, finally, the "Clothing and Sanitary Material Field Depots." Divisional sanitary establishments belong to the reserve of the first line; the remaining establishments to the reserve of the second line.

The Military Sanitary Establishments are under the direction of military medical officers, and are assigned to divisions of sanitary troops, or men who have been trained as "bandage- and litter-bearers, for carrying out the hospital service." The sick, wounded, and hospital *personnel* are required to obey all orders given by medical officers pertaining to the sick and to the performance of duties in the hospital. The senior medical officer is, however, only invested with disciplinary power of punishment over his subordinate medical officers, except when in charge of a railway or ship ambulance, when he also exercises this power over the enlisted sanitary *personnel.*

The military command over the entire *personnel* of each establishment belonging to the combatant strength of the Army, is exercised by the commandant of the sanitary division attached to the hospital. Those establishments which have no sanitary divisions are assigned regimental subaltern officers for the exercise of military command, who have the disciplinary power of punishment over the *personnel* of the hospital belonging to the combatant strength of the Army.

The reports and records of a sanitary establishment are signed jointly by the senior medical officer, and commandant of the sanitary division; but matters pertaining solely to the functions of either require only the signature of the one concerned.

---

*Read before the Association of Military Surgeons.

†Report of Captain Otto L. Hein, First U. S. Cavalry, Military Attaché at Vienna, Austria.

Garrison Hospitals stand first in the Permanent Military Sanitary Establishment, and are organized at all large garrison stations, and, in addition to other purposes, are charged with the training of surgeon volunteers for the medical service and the assistant sanitary *personnel*. At present there are twenty-six of these hospitals—two in Vienna, two in Pesth, one each at Linz, Olmutz, Theresianstadt, Bruner, Comorn, Loibash, Trieste, Ragusa, and Mostar, and one at each of the headquarter stations of the 1st, 3d, 5th, and 13th Corps; some have branches. They are numbered consecutively: for example, "Garrison Hospital No. 7, Grau," "Garrison Hospital No. 11, Prague—Branch Headochin." On mobilization, the garrison hospitals furnish the divisional sanitary establishments, field hospitals, railway sanitary trains, and ship-ambulances.

Every hospital is an independent establishment, under its own staff of medical officers, chaplains, and accountant officers, and a sanitary division. A medical officer, with the rank of field officer, is in charge, and a captain or lieutenant of the "Armee Stand" superintends the administration and economical service.—The latter duties, in the case of the smaller garrison hospitals, are performed by an officer of the sanitary division. There is likewise an apothecary attached to every garrison hospital. In military and administrative matters these hospitals are subordinate to the brigade commanders. They are enlarged on mobilization to afford accommodations for a maximum of 1000 patients.

The *personnel* of the Vienna hospital consists of twelve medical officers, two officers of the Armee Stand, one chaplain, one accountant officer, sixteen officers' servants, four principal division officers, 190 principal division men, one instruction division officer, fifty-nine instruction division men,—total, twenty-one officers and 265 men. This is the largest hospital in the Empire. The smallest garrison hospital, at Ragusa, has a *personnel* of three medical officers, one chaplain, one accountant officer, five officers' servants, two principal division officers, thirty-four principal division men, one instruction division officer, seventeen instruction division men,—total, eight officers and fifty-six men. The total strength of the twenty-six garrison hospitals amounts to 274 officers and 3025 men.

A Troop Hospital is established at every military station possessed of a garrison of more than 500 men that has no permanent garrison hospital and is charged with the treatment of the ill and the training of litter- and bandage-bearers (one non-commissioned officer and three privates per company). They are independent establishments, with an organization similar to that of a garrison hospital, but their staff is not exclusively attached to them, but is furnished from the regiment or corps from which their patients come. A regimental medical officer is in charge, and a line officer is assigned for the supervision of military order and discipline, as well as for the management of economical administration. The nurses and attendants are detailed generally from those members of regiments who have been trained as bandage- and litter-bearers, but are sometimes furnished by the sanitary troops (a regular organization, one section of which is attached to each army corps). On mobilization the troop hospitals are enlarged for the reception of the sick and wounded, and are designated Reserve Hospitals, or Fortress Hospitals in case they are located in fortified places. Additional troop hospitals are organized in some of the recruiting-district stations, to provide for the increased demands incidental to the mobilization of the Army. The hospitals of the military schools, of the invalids, and of the military prisons are organized on a similar model, but form an integral part of these establishments. The invalid hospital at Thenau has a special branch for the treatment of the insane.

In garrisons numbering from 300 to 500 men, Military Infirmaries may be established by order of the military territorial commanders, for the reception and treatment of light cases, and of severe cases where removal to a regular hospital is not possible. Infirmaries may also be established on special occasions, such as a large concentration of troops or the breaking out of epidemic or contagious diseases, for such periods as may be necessary. The medical officer in charge, and the hospital *personnel*, are detailed from the strength of the regiments; and a line officer is assigned for the supervision of the military and administrative service. The duties of nurses and

attendants are generally performed by bandage-bearers, and exceptionally by sanitary-soldiers. As the military infirmaries form subdivisions of their respective regiments, those located in the receiving districts are enlarged on mobilization or disbanded if not required.

Military Bathing and Water Cure Establishments are organized at the more important springs, as Baden (near Vienna), Karslbad, Schonau (near Toplitz in Bohemia), Mehodia, Hof-Gastein, Pystian, Toplitz in Hungary, Buda-Pesth, Topulsko in Croatia, and Toplitz in Corinthia, but are for the treatment of special cases. Some receive only officers; some both officers and men; some only men; and they vary in system and treatment. Most of these are open only during the summer season, and are provided with the necessary staff and attendants from the garrison hospitals or from the sanitary troops. Every establishment is under the direction of a medical officer. In Karlsbad, Schonau, and Mehodia, field officers of the retired list are permanently in charge as "Military Bath-house Commandants;" in the other cures, officers are detailed as commandants during the bathing season as "Military Bath-Inspectors." In war, the military bathing establishments may be enlarged for the reception of the sick and wounded from the front.

In those fortresses of the Empire which are in a state of preparation for defense, such as Cracow, Przemysl, etc., provision for hospital accommodation is based upon the requirements of their increased garrison on mobilization. Fortresses which contain garrison hospitals enlarge them, and eventually establish branches sufficient for the reception of a maximum of 1000 patients, but when the number exceeds this figure Fortress Hospitals are established. Fortresses which have troop hospitals or infirmaries in time of peace, convert them into fortress hospitals on mobilization. Those which have small garrisons, and insufficient even for the erection of fortress hospitals, enlarge their infirmaries to the extent that may be necessary. Fortress hospitals are administrative and independent sanitary establishments, and have a special *personnel* attached to them.

The passage from the peace to the war establishment is effected by organizing the divisional sanitary establishments and field hospitals, railway sanitary trains, and ship-ambulances, preparing halting-stations on the lines of communication for the wounded, furnishing the clothing and sanitary material; and finally by enlarging the fortress sanitary establishments.

The principal object of the sanitary service in the field is to transport the wounded from the battle-field as rapidly as possible to the sanitary establishments in the rear, where they may receive thorough surgical treatment and regular hospital care; and to distribute the sick and wounded over as large an area as possible in the interior of the Empire. The wounded are first collected by the litter-bearers, and given such assistance and care as may be possible. In the first dressing the bearers utilize the bandage-packets with which every soldier is furnished —carried by the cavalry and train troops in the upper right-hand blouse pocket, and by all other troops in the left-hand trousers pocket—each packet containing, wrapped in a piece of vellum, a piece of iodized muslin, three to four grammes of cotton, a compress bandage, and a piece of waterproof.—As the cavalry, artillery and technical troops have no bearers, the duties of the latter are performed by sanitary-soldiers. As a rule, one collecting-station is established for every infantry brigade, about 1000 paces in the rear of the centre of the fighting line; there the wounded receive only such assistance as may be necessary for their removal to the dressing-station. The dressing-station is established from 3000 to 5000 paces in the rear of the centre of the fighting line of the division, in or near large buildings or in tents. Here the wounded of the division are collected and receive their first surgical treatment, after which they are either carried in the ambulance wagons to the ambulance hospital, or removed at once to the field hospitals in the next line, or if possible directly to the permanent hospitals. To avoid unnecessary and repeated examinations, the wounded are provided with diagnosis cards, attached to a blouse or great-coat button, giving nature of wound, treatment received, and condition for transportation. If the distance to the next sanitary establishment,

railway station or ship-landing is too great to be covered in one march, a connecting link (an ambulance hospital) is established, where the wounded are refreshed, and their bandages rearranged if necessary. When the ambulance hospital (one to each division of infantry) is not needed for this purpose, it is sometimes combined with the dressing-station.

The Field Hospitals are mobile establishments, transported by wagon, one being allowed for every division of infantry. They follow the movements of the Army, and are only established when needed, being located if possible in large buildings as far to the front as possible, from 10,000 to 15,000 paces in the rear of the fighting line. To render these hospitals able to follow the marching columns, necessary measures are taken to evacuate them as soon as possible, by sending the wounded to the permanent hospitals in the rear. The transportation of the wounded from the field hospitals to the rear is effected by means of ambulance or other wagons fitted up for the special purpose; by rail, on the sanitary trains, for severe cases; by temporary sanitary trains, for light cases; by water, in the ship-ambulances. "Halting-stations" (*Kranken-halt-stationen*) are established at suitable points on the lines of communication, for the purpose of giving a short rest to men journeying to the rear, and providing them with medical relief, refreshments, etc.

For the reception of the wounded incapable of transportation, stationary or reserve hospitals are established in place of mobile sanitary establishments. Light cases and convalescents are placed in the field infirmaries established on the theatre of war. The sick and wounded sent home are distributed among the military sanitary establishments existing in time of peace, the reserve hospitals newly established beyond the theatre of war, and finally the hospitals and convalescent establishments organized by private societies and individuals. The distribution of the wounded is regulated by the Minister of War. A volunteer sanitary service, already organized in time of peace, co-operates extensively with the military service in war.

The uniform and equipment of the bearer detachments are the same as those of the respective corps to which they belong, their sole distinguishing mark being a black and yellow band worn above the left elbow. The non-commissioned officers carry their rifles; the privates wear a sapper's sword, and carry a pouch filled with bandages and a large canteen of water. As soon as they have performed their work on the battle-field, they return to their respective organizations. The company bearer belongs to the combatant class and is not neutralized.

The flags employed to designate the field sanitary establishments, the arm-bands worn by the sanitary *personnel*, and the sanitary wagons, all bear the Geneva cross. The flags are placed alongside of the national colors (black and yellow).

When the Army is mobilized, a Divisional Sanitary Establishment is organized for every division, the purposes of which are to render first surgical treatment to the wounded, and to transport them from the relieving- to the bandaging-stations, and from there to the next line of sanitary establishments. The sanitary establishments of the forty-eight infantry divisions and eight cavalry divisions are numbered consecutively with their respective divisions: for example, "Infantry Divisional Sanitary Establishment No. 36;" "Cavalry Divisional Sanitary Establishment No. 4." These establishments are directly subordinate to their respective division commanders, and are under the supervision of the division chief medical officers.

Every Infantry Divisional Sanitary Establishment is equipped for forming two relieving (collecting) stations, one bandaging (dressing) station, one ambulance (field hospital), one sanitary-material reserve. Each has a staff of medical officers, and a field sanitary division. During and after battles, until the establishment is evacuated, the regimental medical officers of the division are also on duty with it. The surgical duties at the stations are performed by the regimental medical officers, under the supervision of the division chief medical officer, who generally is stationed at the central point—the dressing-station. As a rule, the senior medical officer and the next two in rank of each infantry regiment are designated for attendance at the dressing-stations, and the remaining regimental medical officers at the

collecting-stations. To each divisional establishment is also assigned a field sanitary column of the "Teutonic Order." The horses of the ambulance and other government wagons are furnished by the First Zug of the train squadron attached to the division. The maintenance of military order and discipline in the establishment, and its economical administration, are in charge of the commandant of the field sanitary division.

The ambulance (hospital) either coöperates directly with the dressing-station, or serves as a connecting link between the latter and the sanitary establishments in rear. When the troops remain in cantonment for a considerable period, the ambulance (hospital) may be employed as an infirmary, by order of the division commander. The sanitary-material reserve contains a supply of medicines and dressings for replenishing the stores which have been expended at the collecting- and dressing-stations; the stores of the sanitary-material reserve are replaced by the clothing and sanitary-material field depots. The field sanitary column is generally attached to the divisional ambulance (hospital). The sanitary-soldiers of the column are furnished by the field sanitary division; the train soldiers and government horses, by the train squadron. The divisional sanitary establishments of the 1st, 8th and 18th Infantry Divisions are organized especially for mountain warfare. The infantry divisional sanitary establishment usually marches at the head of the baggage-train of the division, in the normal order of march.

The collecting- and dressing-station division and wagons, under command of the commandant of the field sanitary division, belong to the fighting train; but the ambulance and sanitary-material reserves and wagons, under command of the second officer of the field sanitary division of the Teutonic Order, are with the baggage train. At a halt, or in camp, the infantry divisional sanitary establishment is employed as a collecting-point for the sick and wounded who are designated to be sent to a hospital; men unable to travel are placed, by order of the medical officers, in the wagons of the establishment, and upon arriving in camp are, if recovered, sent back to their regiments, or, when their number is too great to admit of all being put in the wagons of the establishment, the least exhausted are relieved of their arms and accoutrements, which are placed in the wagons, and they are left in charge of sanitary-soldiers detailed for this purpose. The medical officers of the establishment always remain with the hospital wagons during the march; and four mounted staff cavalry orderlies are attached to every establishment during battle, to establish communication quickly between the dressing-stations and the ambulance (hospital), and the collecting-stations and troops, and to carry orders, etc.

The collecting-stations are placed at a shorter distance from the fighting line in a covered or hilly country than in an open country; the mean distance being 1000 paces, because this is as far as the bearers are able to carry the wounded rapidly without having to stop to rest. Each collecting-station is placed as near as possible to the line of retreat of its brigade, so as not to interfere with the advance of the troops who have not yet come under fire, and must if practicable be upon a wagon-road connecting with the dressing-station. Buildings, hollow ground, trees, etc., which afford protection against direct fire and the glaring light of the sun, with water, straw, wood, etc., in the neighborhood, are the points recommended for establishing the collecting-stations, but as these advantages are seldom found combined, it is demanded that existing facilities be utilized to the best advantage. Each station is marked by day by two flags, one with a red cross on a white field, and the other containing a horizontal black and yellow stripe; at night by a white lantern with a red cross.

The dressing-station is established near the line of retreat of the division, and 3000 paces is its minimum distance from the fighting line, under the most favorable circumstances. When possible it is located in a building or shed, the essentials being ample wood, water, and straw in its vicinity, an easy exit, wagon communications, etc.; it is marked similarly to the collecting-stations. When located in the open, the hospital and field sanitary column tents are pitched for its use.

The hospitals are generally located in the orders for the disposition of troops issued by the chief of staff of the division on the eve of

battle, otherwise by the division chief medical officer.

The ambulance (hospital) is combined with the dressing-station when the field hospitals are so near the battle-field that the wounded can be sent directly to them, or when the dressing-station is established on a railway or river and it is possible to transport the wounded directly to a distant reserve or distributing hospital.

An infantry divisional sanitary establishment is composed of: Medical officers—chief and two assistants; sanitary division—two officers and seventy-five men; train division—wagons, horses and drivers from the train troops, the latter commanded by a commandant—a sergeant-major; field sanitary column of the Teutonic Order (from the sanitary troops one corporal and twelve men, from the train troops one corporal, twelve men and twenty-three horses), and four ambulance wagons and one sanitary wagon packed with sanitary material* belonging to the Order; four mounted cavalry orderlies, during battle. —The total strength of an infantry divisional sanitary establishment is three medical officers, two sanitary officers, 158 men, 113 horses, and twenty-five wagons.

The distribution of the *personnel*, horses and wagons among the subdivisions of an infantry divisional establishment, is as follows: At collecting-stations—six to eight regimental medical officers (only during battle), one non-commissioned officer and seventeen men of the sanitary division; one non-commissioned officer, eighteen men, one riding and sixteen draft horses, and four ambulance wagons of the train troops—the non-commissioned officer of the sanitary division is commandant of the relieving-station division. At dressing-stations—nine to thirteen regimental medical officers (only during battle); commandant and thirty-nine men of the sanitary division; two non-commissioned officers, sixteen men, twenty-three horses, and five wagons (including two hospital wagons of the train troops).—For the transportation of the wounded to the rear from the dressing-station are also employed the empty wagons returning from the battle-field, requisition wagons, etc. Three medical officers, one officer and thirty-three men from the sanitary troops, twenty-three men, forty horses and eight wagons from the train troops, at each ambulance (hospital), including field sanitary column of the Teutonic Order. One sanitary officer, four train soldiers, eight draft horses, two four-horse sanitary-material wagons, to constitute each sanitary military reserve.

Every Cavalry Divisional Sanitary Establishment is equipped for forming one collecting- and one dressing-station. These stations are generally combined. The surgical treatment of the wounded is performed by the regimental medical officers of the cavalry, as the establishment is not provided with a medical staff. The cavalry sanitary division not only furnishes the attendants and nurses, but also provides bearers for the regiments; its strength is one sergeant-major and seventeen men. The wagons, horses and drivers of the cavalry train divisions are provided by the train troops. There are also one sergeant, twelve men, twenty-three horses, six wagons, including four four-horse ambulance wagons for the transportation of the wounded from the relieving- to the bandaging-station.—The wounded are conveyed to the hospitals in rear by means of hired wagons. The total strength of each cavalry divisional sanitary establishment is thirty-one men, twenty-three horses, and six wagons.

On the march, in camp and cantonment, the duties of this establishment are similar to those of the infantry divisional sanitary establishment; and the position of the collecting- and dressing-stations is generally designated by the division chief of staff.

In the Field Hospitals the wounded receive their first thorough medical treatment. Forty are established by the Army, and two by the volunteer sanitary service, on mobilization, at the rate of one per infantry division. They are not specially attached to particular army corps, but are directly subordinate to the chief of staff, who assigns them, as necessary, and the corps in turn place them at the disposal of the divisions of infantry.

Every field hospital can accommodate 600 patients, and is divided into three sections,

*Note the clothing, equipments, and arms of the men, besides the entire train and sanitary stores, are also provided and replenished by the Teutonic Order.

each complete in itself and capable of holding 200 wounded men. Every hospital is furnished with a suitable number of medical officers, chaplains, accountant officers, apothecaries, and a field sanitary division and dispensary. The sanitary material, bedding, clothing, etc., are carried in government wagons especially arranged for that purpose, and horsed by hired teams. A transport column of the Red Cross Society is assigned each hospital for the transportation of the wounded to the rear. The *personnel* of the field hospital comprises one chief and nine regimental medical officers, one military chaplain, three accountant officers, three apothecaries, one armorer (to take charge of the arms and accoutrements of the wounded); in its field sanitary division one field officer as commandant, two captains or lieutenants, 177 men; from the train troops, two blacksmiths and four four-horse teams (for the transportation of the hospitals), five two-horse wagons (for the transportation of the officers and officials), 112 hired horses (for the wagons), and fifty-six civilian drivers under charge of mounted civilian foremen; the transport column of the Red Cross Society—consisting of fifteen two-horse ambulance wagons and one four-horse wagon containing sanitary stores furnished by the volunteer sanitary service, the horses being hired,—a sanitary division, consisting of twenty-four Landwehr or Landstrum men, under the command of a non-active officer, forms the *personnel* of this column. The total strength of a field hospital, including transport column, amounts to twenty-one officers, 276 men, 149 horses, and forty-five wagons.

The Field Infirmaries are established at suitable points on the theatre of war, or on immediately adjoining territory, for the reception of light cases, convalescents, and broken-down soldiers in need of temporary rest, and to avoid the necessity of sending them to more distant sanitary establishments; their number and extent are regulated in accordance with the temporary necessities of the service, but there must be at least one field infirmary for each army corps, with accommodations for not less than 500 patients. Each infirmary has one medical and one sanitary officer, two men of the sanitary troops, and a number of horses and attendants furnished by the *Etapen* troops on those lines of communication upon which the regular traffic between the Army and the interior takes place.

At the theatre of war, reserve hospitals are established, intended to support or replace the field hospitals, in order to permit the latter to be pushed again as rapidly as possible in advance for the immediate reception of the sick and wounded sent from the field and field hospitals, and for the temporary reception of the sick and wounded sent to the collecting-point for transportation to the rear. Their number and capacity are regulated in accordance with the requirements of the service, but there must be at least one reserve hospital for 200 patients for every division. Their *personnel* and material are furnished from the reserves, under the orders of the Chief of Intendence; and field apothecaries and the means of transportation are furnished when needed. They are numbered consecutively, and are subordinate to the Chief of Intendence of the Army. A reserve hospital for 200 patients has one medical officer, one chaplain, and one apothecary, besides one officer and seventy-eight men of the sanitary troops.

Exterior to the theatre of war, reserve hospitals are also established in the interior; for which purpose the localities and arrangements of the troop hospitals and infirmaries may also be employed. They are organized after the manner of the garrison hospitals, and are classified as field sanitary establishments and named after their respective stations, as, for example: "Reserve Hospital at Zuain."

Stations or Halting-Places for the Sick and Wounded are established at intervals on those lines of communication (*Etapen* lines) upon which the transportation of the sick and wounded takes place, and are for the purpose of giving a short rest to men proceeding to the rear, and of providing them with medical assistance. There are two classes of these—those where men passing through receive refreshment and attendance, but with no sleeping accommodations; and those with sleeping accommodations and furnishing regular medical treatment.—The former are established at railway stations where long stops take place. The comfort

of the wounded is attended to by the *Etapen* service, and medical treatment by civilian physicians, who are established at the railway stations from which trains are despatched, and at all stations on the road at which the transportation must stop over night. The *personnel* and material of the halting-stations are furnished by the Intendence of the Army. Two stations, each accommodating 200 men, are provided for every army corps; there are besides numerous halting-stations which are established by the volunteer sanitary service. A section for 200 patients has one medical officer and one non-commissioned officer and six men of the sanitary troops. The horses and attendants are furnished by the *Etapen* troops.

Ambulance Field Sanitary Establishments are mobilized in war and divided into "railway sanitary trains," "improvised sanitary trains," and "ship-ambulances;" they are for the purpose of transporting the severely wounded from the field and reserve hospitals, and directly from the divisional sanitary establishments, to the permanent hospitals in the interior of the Empire. Such are independent establishments, and have a staff of medical officers and apothecaries, and a field sanitary division, besides the necessary means for the care and refreshment of the wounded during the journey.

At least twenty-six railway sanitary trains are mobilized by the Army, and six to twelve are provided by the "Order of Malta;" every train accommodates 104 patients. Also, improvised or temporary sanitary trains are formed for the reception of light cases, in case the railway sanitary trains are insufficient to accommodate them; merchandise and passenger wagons, fitted up temporarily for the purpose, are used. Each train has a medical or combatant officer in charge, its sanitary *personnel* and material being drawn from the reserve under the Chief of Intendence. Refreshments and medical attendance are only furnished at stopping-points.

Under the title of Ship-Ambulances, towboats are equipped as movable hospitals, in case of necessity, for the transportation of the wounded on the Danube, Thein, Drau, and Save Rivers; each boat can accommodate from 116 to 123 patients, and has a *personnel* consisting of two medical officers, one apothecary, two non-commissioned officers and twenty-five men of the sanitary troops.

The Clothing and Sanitary-Material Field Depots are charged with supplying sanitary material, clothing, equipment and field supplies to the troops and reserve establishments of the field army; also to those sanitary establishments (field infirmaries, reserve hospitals, halting-stations, etc.) which are created when necessary by the Chief of Intendence. Each army and independent corps, or division, is allowed one such depot.

(*To be continued.*)

A PAGE FROM THE HISTORY OF ANCIENT MEDICINE.

BY P. C. REMONDINO, M.D.

At the dawn of our civilization the practice of medicine was at times about as risky an occupation as that of a laborer in a powder mill, and the man of science in the early days of Greece was apt to fall into hands as little considerate of his sensibilities as were the aborigines of Oregon toward an unsuccessful medicine-man. Royal physicians have not always had it all their own way—any more than royalty itself. It is well known that the physician of Louis XI. often wished himself off in some swampy wilderness herding hogs or catching edible frogs—especially when Louis became a little suspicious as to his loyalty and integrity. The court physicians of the times of Louis XIV. also had an uncomfortable existence—they did not in reality enjoy the ordinary peace of mind or of conscience, nor the physical happiness, of a fourth-rate inn-keeper. Even in our times, court physicians do not have such jolly good times—at least, so must have thought one of the medical attendants upon the late Victor Emanuel, who did not propose to be treated like an old woman by having his chest encased in a flaxseed-meal poultice. The King was impatient and a little irascible at all times, and unmanageable when sick; and when, under the restlessness caused by a congested lung, he found the doctors industriously engaged in adjusting a generously proportioned poultice to his chest, his warrior spirit rose to the occasion and, grasping the poultice, he dropped it with some empha-

sis on the nearest bald-headed medical man. Zimmermann found as unreasoning and irascible a patient in the great Frederick, and no doubt the honest and practical old Hanoverian physician would have liked to divest the King of his royal prerogatives and tumble him into some hospital ward where he could have treated him in a plebeian and rational manner. Old Napoleon was full of hard common-sense in these matters; when the distinguished accoucheur in attendance on the Empress Maria Louisa (overcome by the gravity of the case and some dreaded complications, as well as by the rank of his august patient) imparted his fears to the Emperor and apologetically suggested that it might become necessary to do so-and-so, he was much surprised to hear the practical Emperor order him to never mind *the Empress*, but to go at it as if she were the poorest shopwoman of the faubourgs, and save *the woman*. Napoleon knew that in a case of confinement it was an accoucheur that was wanted, and not a courtier. That was the way Esmarch treated the Emperor William when Nobling filled his tough old imperial majesty with duck-shot; and that was the manner, he hinted, that should have governed the treatment of the lamented Garfield — he should have been treated with the same singleness of purpose that would have characterized the care of a private soldier in an outpost hospital. The physicians of the court of Victoria's early reign who lost place and reputation by honestly standing up for Lady Flora Hastings also wished that they had never seen a court or waited on royalty.

Herodotus relates that on one occasion the great Darius met with an accident from which he emerged with a badly sprained and very painful ankle. At that period of the world's history the physicians educated in the old Egyptian temples were much sought for by the rulers of Western Asia, and each court possessed a number of these physicians skilled in the various specialties; and no sooner did Darius reach his palace than the Egyptian men of science then at the Persian court were called to his assistance. Whatever great medical learning the old Nile temples may have been able to dispense, great skill in all the rational treatments of sprains does not seem to have been included in the curriculum, as King Darius's suffering increased and the poor monarch could find no rest, to the great perplexity and discouragement of the Egyptians. As the outlook became gloomier and the pain more severe, Darius began to have fears that he would be permanently disabled. At this juncture he was informed by some of his household that in the prisons there was then confined a Greek who was said to know something of surgery, as he had held the position of physician to Oretes, a former governor or king of Samos, whom Darius had dethroned and caused to be put to death. This prisoner was none other than Democedes, an illustrious Greek physician, but a native of Crotona, who, in the confusion and in the general collecting-in of the slaves and chattels of Oretes, had somehow become mixed with these latter, and in their company brought to Susa along with the rest of the plunder. A common slave stood some chance of again seeing his country, but good physicians were so rare and in such demand that when a king ran across one he generally appropriated him and took good care that he should not go astray; and the chances for any reputable Greek physician ever escaping from the Persian court were not very numerous. Democedes knew this full well, and had accordingly disguised his position to the best of his ability, so that when brought before Darius he in a manner denied his calling and profession; but on seeing the executioners make ready the implements of torture to compel him to own up the truth, out of consideration for his anatomy — which he very naturally did not wish to see disturbed, seeing that nobody but the Egyptians were around to patch him up—at the sight of the torturers he admitted having some knowledge of medicine and surgery, at the same time expressing his willingness to do, as far as his poor skill would permit, all that was asked of him. The sprain was then a week old, and the swelling and throbbing, with excess of pain, had given the King rest neither day nor night, and he was then in the greatest misery imaginable — even for a typical and despotic king. The Egyptian physicians, it seems, were more on the natural-healer order and not very well versed in the other rational treatments of such cases.

In accordance with their system they had wrenched, manipulated, massaged, and generally tortured the suffering and irascible King, in their vain efforts to afford relief, and had in consequence greatly aggravated the case, as this was not a proper one for such treatment. Democedes at once applied the warm fomentations of the Greeks, which not only relieved the King of his great pain so that he fell into a much needed sleep, but in a short time resulted in the restoration of the ankle to its former use. Darius, we are told, was greatly delighted with the gentleness and skill of the Greek surgeon, and when of a sudden the remembrance of the mental and physical tortures to which the Egyptian physicians had subjected him flitted across his mind, instead of instituting suits for malpractice in the Persian courts, with demands for heavy damages—as an American might have done—he simply ordered the whole Egyptian faculty to be immediately crucified.

Democedes was none of your narrow-minded, vain, egotistical, jealous practitioners; neither was he a great stickler for the code of ethics in vogue at the time, which would have prevented him from taking any notice of the degraded and about-to-be-crucified Egyptians—who were just then beginning to think that extracting the fuses from unexploded bombs was a far less risky occupation than that of practicing surgery and medicine on the person of a royal despot. Finding that Darius was well disposed and willing to grant him any reasonable request, Democedes generously asked and obtained the pardon of the disconsolate Egyptians. History does not relate what became of these unlucky men, but very likely they were consigned to some obscure position in the royal kitchens, to manipulate the kettles and *masser* the saucepans to their hearts' content.

Professor Osler, of Baltimore, is quoted as saying that without a good store of analytical common sense, the time spent in acquiring a merely technical education is spent in vain. A study of medical biography, ancient or modern, lends support to this view. The noted Greek physicians who flourished some 500 years before the beginning of our era were men remarkable for the uprightness of their moral principles as well as for their modesty and their breadth of view, original powers of observation and research, and common sense. We cannot help admiring in them the utter absence of all "Barnumism," hypocrisy, and love of the fictitious and misleading. Well said Sir John Lubbock, that in the pagan philosophy of the ancients there resided more Christianity than in all our modern theologies. Only imagine the travesty, were the figure and countenance of America's *great* medical reprobate to replace that of Hippocrates in the picture of "Hippocrates Spurning the Wealth of Asia," when the grand old sage refused all the wealth and honors offered by the Persian ambassadors to induce him to leave bleak and poverty-stricken Greece for a residence amid the splendors of the Asiatic court. The spirit of Hippocrates has lived in an Agnew or in a Gross, even in our own times; but too many follow in the deceptive footsteps of *the* great reprobate, too psychologically degenerate and morally warped to realize the truth that

"Corruption wins not more than honesty,"

and too pachydermatous ever to feel the killing frost that sooner or later overtakes the overselfish and the unscrupulous.

Democedes was offered all that a sensual, sordid and selfish or vain man could appreciate or desire, in the shape of wealth, possessions, and honors, would he but remain voluntarily at the court of Darius; he was not, however, either by inclination, cultivation, or temperament, a Chicago alderman or a Tammany sub-chief; nor was he a prototype of the Fifth avenue dude, or of the modern European "noble" in search of a wealthy American wife. As some celebrities of our late Woman's Congress would say, he felt that he had a "mission" on earth to perform, or a "sphere in life to fill," as well as a progeny to father, and the Persian environment was a bar to his high purposes. He therefore made up his mind to get away at the earliest opportunity. Some accounts tell us that he cured the Queen Atossa, the daughter of Cyrus and wife of Darius, of an ulcer of the breast. Through the favor of the Queen he obtained from the King the command of a Persian naval expedition intended for the exploration of the Greek and Italian coasts; but no sooner had the ship touched at Taren-

tum than Democedes, eluding the vigilance of his Persian companions or guards, forsook the command of the ship and proceeded to his native town, Crotona, where he married the daughter of Milo, the renowned athlete and wrestler. Darius's officers attempted the abduction of Democedes, whom they seized in the forum of Crotona, but the citizens rallied to his assistance and beat the Persians off with their clubs.

San Diego, Cal.

CONTRIBUTION TO ÆTIOLOGY OF MEDIASTINAL TUMORS.

BY DOCTOR FRANZ KARNIK.

The tumors localized in the mediastinum, owing to their rarity, seldom come under clinical observation. Of the pathological benign formations, the hypertrophic thymus develops *de norma* up to the second year of life, atrophying after the fifth year, and rapidly disappearing during the period of puberty, when it is replaced by fatty tissue; and for the diagnosis of a hyperplastic thymus growth, the microscopical disclosure of Hassal's corpuscles is a reliable guide. One must, further, enumerate among benign mediastinal tumors, lipomas, fibromas, dermoid cysts, teratomas, and hyperplastic lymph-glands—but these may here, as well as in other places, develop malignancy, and of this class is the case described by Virchow, of a large teratoma obtained from the cadaver of a man twenty-two years of age, in which were present carcinomatous and sarcomatous elements, besides a large number of embryonal striated muscle-fibres.

Malignant mediastinal tumors in individuals of earlier age are usually sarcomata, more rarely carcinomata. Mediastinal tumors, according to Feldmann, occur in men three times as frequently as in women, and are rarely encountered in either at an advanced age. Eichhorst found among thirty-five, Riegel among forty-one, and Thomayer among forty-six cases, but one case of more than sixty years. Riegel, moreover, asserts these tumors occur chiefly between the ages of twenty and thirty, which is corroborated by Thomayer; of the patients of the latter, eighteen were between twenty and thirty years of age, eight between thirty and forty, and five between fifty and sixty. All agree that the anterior mediastinum is, as a rule, the seat of malignant tumor, though Gluzihki and Impaccianti and others describe some few exceptions.

Great difficulties are associated with the diagnosis of mediastinal tumors, for they may be simulated by neoplasms of the lung or pleura on the one hand, while on the other mediastinal tumors do sometimes invade these organs; a malignant pulmonary tumor can only be accurately diagnosed when the microscope shows its elements in the sputum. Again, the diagnosis of a sarcomatous or carcinomatous pleuritis is rendered possible by establishing the presence of tumor-particles in the aspirated mass. It may happen casually, as reported by Unverricht, that the diagnosis is assured by the proliferation of the tumor from the point of puncture after puncture of the thorax; and it is by no means unusual for the neoplasm to proliferate and penetrate the thoracic wall so it can be felt under the skin. Almost insurmountable diagnostic difficulties become heaped one upon another when a comprehensive pleuritic exudate disguises the physical signs of the tumor. Clinically, a tumor is to be classified as mediastinal only when it appears as such anatomically.

In view of the difficulty attending differentiation, and the rarity of these tumors at an advanced age, it may be pertinent to report a case—the third of its kind that was correctly diagnosed during life:

A man 69 years of age, supposedly suffering from pleuritic exudate, was brought to the Hofrath Eiselt Clinic November 29th, 1894. He had never before complained of any ailment, and this trouble dated only from the end of the previous August; it began with difficult breathing—no other symptoms. During the first three weeks he was able to walk; then, on his physician's advice, he took to bed and was treated with diuretics. The dyspnœa, however, constantly persisted. Before coming to the Clinic, appetite was always good, stools and micturition normal, and no apparent elevation of temperature. He was of slender build, and ill-nourished. Skin dry and pale; mucous membranes blanched; temporal arteries prominent and tortuous; pupils, equally large, reacted promptly; neck short, without special abnormalities; thorax

flattened, the two halves participating unequally in respiration—the right being more elevated than the left,—and intercostal spaces of the right side drawn in strikingly during respiration; supra- and infra-clavicular furrows ill-defined; breathing superficial, accelerated (44), labored; heart-beat invisible. At the level of the ensiform cartilage, circumference of the chest was eighty-two inches, forty-two being that of the left half; at the level of nipples eighty-three inches, that of left half forty-one and one-half. The distance of the nipples from the clavicle and from the median line was the same on both sides. Abdomen drawn in, elastic; no enlargement of lymphatics, and no œdema of legs. Pulse 132; temperature 96°. Daily secretion of urine about two pints, without pathological constituents. Appetite good; stool normal; no expectoration. Psychic depression. Forward to the right, the percussion sound over lung full and clear; diaphragm at the level of the seventh rib; to the right, back, percussion sounds all full and clear. Respiration sharply vesicular. Heart-tones faintly audible; flapping on the right edge of the sternum at the level of the fourth rib. On the left side as far as the third rib the sound was subdued, then completely suppressed as far as the eighth rib; at the left, back, very short as far as the fourth dorsal vertebra, then duller. Fremitus absent; considerable resonance on percussion. Respiration forward, as far as the third rib, scarcely audible; backward, to the fourth dorsal vertebra, bronchial; in the deeper parts, absolutely suppressed. The edge of liver for two finger-widths was apparent under the costal arch.

A month later, aspiration yielded a trifle more than three pints of serous, yellowish, moderately turbid liquid. On examination the day following operation, heart sound was somewhat shorter in front, on left side, as far as the fourth rib, in transverse direction, the subdued sound extending back to the median line; at the back and as far as the middle of the scapula the sound was somewhat fuller, then shortened as far as the angle of the scapula; perfectly hollow in the lower parts. Respiration forward, as far as the fourth rib, weaker; at the back, as far as the middle of the scapula, vesicular; at the apex of the scapular angle, bronchial; then extinguished. Frequency of respiration, 40; pulse 112; temperature normal.

The case was decided to be one of mediastinal tumor, with malignant exudative pleuritis. Death occurred suddenly two months after his appearance at the Clinic, and the autopsy revealed malignant tumor of the mediastinum with infiltration of the adjoining lymphatic glands of the substernal connective tissue on the left side, and of the hilus of the left lung along the bronchi and vessels; serous pleuritis, with infiltration of both lobes; total compression of the left lung; right-sided pleuritis after infiltration of the interlobular pulmonary tissue. Also there were multiple metastases of the liver; venostasis of the intestines and stomach; moderate induration of the abdominal organs; general atrophy. The right half of thorax arched forward. The diaphragm of the right side was on a level with the sixth rib; of the left side, even with the eighth rib. The left pleura contained a quantity of yellowish viscid liquid, and its walls were thickened by fibrous, flat, whitish-gray, soft, lumpy infiltrations, particularly in the axillary line and in the neighborhood of the vertebral column. The left lung was compressed, its apex and the internal edge adhering to the pericardium; the anterior edge merged gradually into the tumor mass; the visceral lobe was thickened, and anteriorly at the edge was covered with superficial infiltrations; interlobar furrow free at the back, obliterated in front. The pulmonary tissue was moderately œdematous, on cross-section presenting a slate-gray color; in the upper and lower lobes the bronchi were cylindrically enlarged, and at the hilus the tumor mass proliferated along the bronchi into the pulmonary tissue. The tumor mass was of soft consistence, of gray-reddish color, rather sharply outlined. The heart was small and relaxed, coronary arteries serpentine, right ventricle dilated, valves tender; the left ventricle was unequally enlarged, and the semi-lunar valves moderately thickened. The aorta was atheromatous, in places softened into a pap-like mass and covered with thrombi. The pericardium adhered to the outer surface of the left lung. The superior vena cava was enlarged, and at the point of division appeared a wall-like thrombus of the right subclavian vein — in fact, this vein was completely blocked by masses of thrombi. The peri-œsophageal and peri-tracheal tissues in the two lower thirds were infiltrated with the neoplasm; indeed the greater part of the tumor rested on the bifurcation of the wind-

pipe. The tumor merged, without definite outlines, into the peri-glandular infiltrations.

Returning now to the diagnosis: In interpreting a case, we examine one organ after the other, and, when the whole tableau is before us, compare it with familiar pathological conditions, and our conclusion is influenced by the histories of previous cases. For this reason great interest attaches to the experiences published by Curschmann and Besançon. The former reports an anterior mediastinal carcinoma occurring in a man 41 years of age. The pains radiating from the sternum to the vertebral column constituted the first evidence of the disease. Later on, paresis of the vocal cord developed, which was ascribed by Curschmann to pressure on the left recurrent nerve. The brachial plexus being compressed by a carcinomatous infiltrated gland, was the cause of radiating neuralgic pains and twitchings in the upper member, culminating finally in complete paresis of the extremity. On the anterior lower surface of the neck and upper parts of the thorax a dense venous net was observed, conditioned by the fully expanded veins under the clavicle and in the arm. This is explained by engorgement in the upper vena cava, which also induced notable swelling in the face and in the region of the thyroid gland. Diagnosis was verified by section, and the tumor proceeded from the interior surface of the upper and triangular portion of the sternum.

Besançon observed a mediastinal carcinoma in a woman 78 years old, in whom the tumor perforated the right bronchus and developed in the upper parts of the anterior mediastinum. The mediastinal lymphatic glands were greatly enlarged; the phrenic and recurrent nerves remained intact; the right pleural sac contained more than two pints of hæmorrhagic exudate, and the walls were flecked with lentil-sized nodules. In the parietal lobe there were pneumonic infiltrations in a state of hepatization.

An instructive case of right-sided pleuritis complicated with mediastinal tumor is described by Leube, the great peculiarity of which lay in the fact that by percussion one could follow the growth of the neoplasm, and that the tumor finally proliferated out of the thoracic cavity into the fossa jugularis, becoming thus appreciable to the touch. The patient was 22 years old, suffered from dyspnœa, palpitation of the heart, and later on from dysphagia and aphonia. The upper part of the sternum arched forward in a very striking manner, and the superficial veins of the upper right breast were not only greatly enlarged but very prominent. Cyanosis and œdema of the right face and right hand also developed. Prior to death a stenotic bronchial murmur became audible at the level of the third intercostal space. At the autopsy it became evident these symptoms arose from the development of an enormous mediastinal sarcoma, chiefly on the right side, with compression of the trachea. The right innominate vein was entirely compressed by the neoplasm, the right lung largely so.

Litten succeeded in diagnosing mediastinal tumor during life in a man 22 years of age, in whom there developed, in addition to very distinct cyanosis, œdema, dilatation of veins, etc.—ascribable to contraction of the upper vena cava—a hæmorrhagic diathesis. At the point where puncture of the thorax was performed for the purpose of aspirating the pleuritic exudate, suggillations or ecchymoses developed; and the blood also assumed a leukæmic character. At the autopsy a large, small-celled sarcoma was found.

All the cases cited were tumors of the anterior mediastinum. Hammer, however, publishes a case of tumor proceeding from the posterior mediastinum in a man 49 years old, supposed to be suffering from stenosis of the right bronchus. Autopsy revealed, at the level of the first dorsal vertebra, in the posterior mediastinum, a tumor the size of one's fist, proliferating forward and perforating the posterior tracheal wall at the level of the bifurcation; the left bronchus was compressed rather more than the right. The neoplasm was readily separated from the vertebra, and cross-section revealed a number of nodules as large as a hazelnut, which ultimately proved to be infiltrated lymphatic glands. Under the microscope a large-celled alveolar sarcoma was revealed.

I will now endeavor to elucidate the individual symptoms observed in the case that appeared at the Hofrath Eiselt Clinic. The apyrexia which prevailed before and during the entire course of the disease dispelled the thought of a simple pleuritis, as did likewise

the insidious beginning of the disease and the entire absence of pleuritic pains. The further fact that under the left clavicle there was notable dullness, although the patient remained recumbent for several months, also spoke against the supposition of a pleuritis, for it stood to reason that the exudate, by reason of gravity, would seek the lowest level. The patient nevertheless had the appearance of one suffering from very severe disease—there was psychic depression, dread of death, and finally dyspnœa (evidently caused by the proliferation of the neoplasm into the pulmonary tissue) that would not abate. A notable fact also was that after paracentesis the quantity of urine was materially diminished — before this, diuresis fluctuated between a trifle over two, and one-and-one-third pints, but during the first five days after the operation it sank to twenty-two and twelve ounces.

An arching forward on the anterior surface of the thorax was not observable, doubtless owing to the fact the tumor was not an integral growth extending uniformly in all directions; on the contrary, it was made up of great cohering tumoral masses seated back of the sternum and extending in a direction opposite to that of the tracheal bifurcation. The acceleration of the pulse may be explained by the paresis of the cardiac vagus fibres.

Hofrath Eiselt describes a case that presented this latter phenomenon: A woman 42 years old suffered from carcinoma of the right lung and right-sided exudative pleuritis; high fever, dyspnœa, coughing, pains in the breast, and acceleration of pulse, were conspicuous symptoms. Autopsy showed the right vagus was completely imbedded in the mediastinal tumoral masses.

The persisting psychic depression and somnolence observable before death, I am inclined to refer to the prevailing abnormalities in the ebbing of the arterial and flowing of the venous blood. One of the most striking symptoms in the case was the net formed on the anterior right surface of the thorax by the enormously dilated and interwoven subcutaneous veins, arising doubtless from a constriction of the innominate vein; as a result the venous blood was obliged to reach the right heart through collateral channels—azygos and intercostal veins. Indeed, the collateral circulation was quite fully developed, for the oft-cited œdema on the neck, face and breast was not observed. Neither were the inferior extremities or the abdomen cyanotic or œdematous, and the autopsy revealed the actual compression of the lower vena cava to be so insignificant as to nowhere induce more than very moderate venostasis of abdominal organs.

The partial œdema of the right and total œdema of the left upper extremity, suggested thrombosis of the subclavicular veins; the venous thrombosis was an important indication, since it is a symptom that does not occur in inflammatory pleuritis; further, the theory of its complication with simple pleuritis was controverted by the fact that such thromboses are uniformly encountered only in the lower extremities, in the pelvis, and in the pia mater. On the other hand, thrombosis of veins is by no means uncommon in the presence of malignant and mediastinal tumors; in the descriptions of such there is, here and there, mention of thromboses of the innominate and subclavian veins, and recently Oesterreicher described a mediastinal carcinoma in which the upper vena cava was thrombosed. Venous thrombi have also been found with benign tumors, and a case in point is that of fibroma of the mediastinum with thrombosis of the upper vena cava, described by Pastau.

The striking cachexia was due to the malignant nature of the tumor, and the advanced age pointed with tolerable certainty to carcinoma.

It remains for me only to cite a few symptoms which were missing in this case, that have been observed by others in mediastinal tumor. Nélaton and Walshe describe a compression of the innominate artery, enfeebling the pulse on the same side. In other cases special reference has been made to dysphagia, the cause for which is to be sought, on the one hand, in compression of the œsophagus, and on the other hand in paresis of the vagus; the affection of the vagus has also induced vomiting in a number of cases, and the attack on the recurrent nerve was manifested either as glottic spasm (Krishaber) or as paresis (Curschmann).

When the phrenic was attacked by the

neoplasm, hiccough and pains in the region of the diaphragm were observed. Rossbach described three cases with asymmetry of the pupils, in which the sympathetic nerve was diseased; and for the latter reason, exophthalmos is at times observed. Bennet cites one case in which the spinal cord was likewise involved.

With respect to treatment, permanent success can only be expected when the tumors are benign.—Rochard describes one case of mediastinal fibroma which was permanently healed by operation. With malignant tumors, the practitioner must be content to treat symptoms.

A diagnosis of mediastinal tumors is seldom definitely made,—it usually remains an open question,—owing to the complex and obscure symptoms. Often percussion will utterly fail to reveal the tumor, and there is every chance the malady will be mistaken for a form of pleuritis or pleuritic exudate.

Vienna, Austria.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

SUPPRESSION OF URINE.

Editor MEDICAL AGE:

In THE MEDICAL AGE for September 10th Doctor Rininger gives an account of a case of supposed total suppression of urine which lasted *forty-eight days*, the patient meanwhile *remaining in perfect health otherwise*. It seems to me the patient was a fraud, and that removal from her home and friends, and committal to the care of an experienced nurse, who would not leave her for an instant either night or day on any pretext whatever, would have brought about a speedy cure It seemed remarkable that she should have succeeded in deceiving three successive medical men with such a story, and I thought it might be worth while to gather together a few facts concerning suppression of urine, lest any one else be caught napping by a similar patient.

It is impossible for a person in anything like perfect health to have total suppression of urine for long, and remain well. The symptoms which ensue vary, of course, according to the cause of the suppression, but even in hysterical suppression, which seems to affect patients less than other kinds, there would be vomiting and headache within a few days.

It is impossible for a person with total suppression of urine from any cause to live for forty-eight days. According to Quain's Dictionary of Medicine: "When suppression is absolute, the duration of life appears to vary from nine to eleven days." A case is mentioned in Osler's Medicine, page 717, which lived eleven days.

As far as I can gather, total suppression of urine only occurs in the following diseases, symptoms of one or other of which would be found if carefully sought for in any case of true suppression:

Functional suppression may arise from: Acute Bright's and the diseases it follows, as scarlet fever and diphtheria; cholera, *hysteria*, shock—either a fright, mental emotion, or after operations on the rectum or genito-urinary tract, spinal injuries, or acute intestinal obstruction; cantharides — either internally or used as blister or hair-wash; turpentine; embolism or obstruction of the aorta or renal arteries.

Obstructive suppression may arise from: New-growths of urethra, bladder, or involving both ureters or kidneys; calculus.

Suppression of urine may be feigned. Urinary diseases are often feigned, but incontinence is more often selected for this purpose than suppression, because it is easier to carry out. I recall one case in point, however, which was told me several years ago by a prominent English surgeon. A young woman had been sent by her parents to a situation that she did not like, and after staying there a few days she returned home, complaining that ever since going away from home she had been unable to make any water. A doctor was of course sent for, and on his arrival he found the bladder empty but everything apparently normal. He went twice a day, but the bladder was always empty, and the mother said the girl had not passed any urine between his visits. Still no other symptoms developed, and after a few days he began to get suspicious of the patient's good faith, and directed that a strict watch be kept on her, especially when she thought no one was near. This was carried out rigidly, with the result that her little dodge was discovered — which was to pass her water into a large sponge every time she got an opportunity, and then squeeze it out of the window. Needless to say she made an early return to her situation.

Of course, in the above case there was a distinct motive for feigning disease; in other cases the only motive is to elicit sympathy and get "fussed with"—a motive sufficient,

however, to induce neurotic women to devise all sorts of schemes and put themselves, as well as other people, to any amount of trouble.

In the above remarks I have chiefly had total suppression in view, though it must be borne in mind that suppression may be total or partial, the latter being much the commoner. When anuria really exists, whether complete or partial, it is an affection which demands prompt treatment, and the more the treatment is directed towards making the kidneys do their own work instead of depending much on forced action of the skin and bowels, the more successful it is likely to be.

As the affection is only a symptom, the treatment in any case must be directed to the cause, or the disease which gives rise to it.

J. J. MOONEY.

Detroit, Michigan.

SAW PALMETTO IN GONORRHŒA.

Editor MEDICAL AGE:

Permit me to call attention to a property possessed by Saw Palmetto Compound to which I have seen no reference in any publication, viz., its remarkable therapeutic powers in gonorrhœa.

In the chronic cases of this malady—those which appear to be cured, but are prone to recur upon slight indiscretion, such as the drinking of spirits, sexual indulgence, etc.—and which are a cause of great trouble to the practitioner, this preparation promises results that are more than satisfactory. In these cases the pus discharge is reëstablished on apparently little provocation, and once fairly reëstablished is apt to persist indefinitely and resist all ordinary remedial efforts. It is here that I have found the Saw Palmetto Compound most effective, in teaspoonful doses every three or four hours. The discharge is usually arrested in three or four days, and if the remedy is continued two or three weeks permanent relief appears to result. Of course the doses may be gradually given at longer intervals.

In acute gonorrhœa the remedy has a soothing effect—an action that is potent as regards all mucous membrane of the genito-urinary tract. It tends to in great measure relieve the burning urethral pain that accrues to efforts at emptying the bladder, and likewise the feeling of weight and uneasiness which obtains to this organ and is also manifested in the testicles. It does not, however, control the discharge as readily as in the chronic form of the malady, for in the latter during its use even the injections may be omitted.

In gleet which results upon stricture or beginning of stricture, Saw Palmetto Compound apparently has no effect.

Very truly yours,

J. D. HATTON.*

THE WOODBRIDGE TREATMENT IN TYPHOID.

Editor MEDICAL AGE:

Recently, having occasion to treat a number of cases of enteric fever, I utilized Doctor Woodbridge's formula, and I am obliged to acknowledge that this measure appears to be abortive when resorted to early in the disease. Even after the twelfth or fifteenth day, it appears to promise better results than any other remedy.

After employing for a few days I invariably observe that the bed, bedding, perspiration, urinary secretion and alvine discharges all appear to be saturated more or less with the medicament, which goes to evidence it is intestinally antiseptic, also that it is intravascular, pervading the entire system wherever the blood circulates.—If this is correct, it cannot but be of value.

I must admit, like many others, I was at the outset strongly prejudiced against this method, and not a little because of Doctor Woodbridge's statement that typhoid could be aborted — which is contrary to general teaching; also on account of the utterance credited to him to the effect that any physician losing a case of typhoid should be held strictly responsible therefor.

I believe I am the first to use this abortive treatment in this neighborhood. The results that have thus far accrued compel me to believe its value has not been exaggerated.

Very truly yours,

F. M. GREEN.

Lexington, Ky.

ELECTION OF OFFICERS.

At the annual election of the Wayne County Medical Society, Detroit, the following officers were elected: E. B. Smith, President; W. R. Henderson, Vice-President; Frank S. Hough, Secretary; C. H. Leonard, Treasurer.

* Professor of Obstetrics, Diseases of Women and Children, College of Physicians and Surgeons, Drake University, Des Moines, Iowa.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., OCTOBER 25th, 1895.

Editorial.

PATHOLOGY OF CHOLERA.

The comma bacillus, claims of preventive inoculation, etc., have absorbed so much attention of late years that the real pathology of this malady has been practically ignored. THE MEDICAL AGE has before called attention to the evidences that the lesion is, probably, primarily within the central nervous system—a theory also upheld by the late Alexander Harkin, of Belfast, Ireland, whose successes in the management of this malady, based upon this pathology, were little less than wonderful. It is of interest now to know that Tschistowitsch, who investigated cholera in the pathological laboratory of Winogradow, has arrived at the same conclusions as Doctor Harkin and THE MEDICAL AGE. The most important of his observations, as published in the *St. Petersburger Medicinische Wochenschrift*, are as follows:

In cases dying in the algid stage—when this stage appeared within twenty-five to thirty hours of the inception of the disease—unmistakable changes were observed in the cerebrum. Those that died during the period of reaction presented the same changes but of a more advanced type—in severe cases with well marked typhoid symptoms the changes were most marked; the alterations being chiefly in the nerve cells, but to some extent in the blood-vessels. In the ganglionic cells in rapidly fatal cases there were evidences of œdema manifested through increase of intercellular spaces and the formation of fine vacuoles in the cell bodies. Later certain of the nuclei became irregular in outline, indistinct, were not affected by nuclear stains, and finally entirely disappeared; at the same time the cell substance became cloudy, coarsely granular, lost its connection with its processes, and became merged either into a mass of granules surrounding the nucleus or—where the latter had undergone changes—the entire cell was transformed into a collection of granules. In other cases, after the loss of the nucleus, the cells became more homogeneous. In the intercellular spaces, as well as in the walls and bodies of the nerve cells, were found round and oval neuroglia and round-cell nuclei.

The small blood-vessels and capillaries were also surcharged; the peri-vascular lymph-spaces, slightly enlarged, contained extravasated blood, granular pigment and yellow flakes composed of disintegrated and adherent blood-corpuscles; also pigment granules were found within the vessels. Small hæmorrhages were frequent in the cerebral substance. The cell substance of the larger neuroglia, with readily recognizable protoplasm, gave evidence of having undergone granular degeneration though their nuclei and those of the small neuroglia cells were not visibly altered.

In proportion to the extent and severity of the seizure the frontal and post-frontal convolutions exhibited the most marked changes.

Finally, Tschistowitsch holds it is evident that the cerebral changes in cholera, as well in the algid stage as in the period of reaction and typhoid symptoms, are of the nature of an acute degeneration and necrosis, and not of a peri-vascular inflammation.

Now that this pathology has emanated from a trans-Atlantic source and need not be recognized as the result of the labors of Anglo-Saxon authorities, it is probable our American periodicals will be willing to accord it some attention—an attention that was denied so long as the theory emanated from British and American sources. We would here, moreover, again call attention to the fact that THE MEDICAL AGE was the first to promulgate this theory on this continent, which theory is given at greater length in the work on "Cholera and its Protean Aspects" emanating from the press of Mr. George S. Davis.

MEDICAL LITERATURE.

There is a large amount of trashy literature circulated among the members of the profession that unfortunately exerts more or less influence upon those into whose hands it falls. This literature, moreover, has a tendency to recommend unwise operations, and has already led surgery to a condition in which the knife takes precedence over every other therapeutic measure.

Unless one is behind the scenes and knows something of the real standing of a writer, he is liable to accept much that appears in literature as true and the outcome of large experience, whereas the "would-be authority" is possibly just fledged from his *alma mater*. The majority of the deductions found in medical essays are open to severe criticism, for, with the existing large number of journals eager to reap the advertising harvest, it cannot be expected editors will scrutinize closely where their pockets are in question.

In the last few years the papers of dogmatic character, emanating from the pens of those not fairly out of medical swaddling-clothes, have far outnumbered the legitimate contributions. Men of long and wide experience cannot find time to publish three or four articles a month in different journals, as is done by many in the interests of self-notoriety.

This multiplication of the personality of self-seeking scribblers by means of the medical journals is a rank injustice to the profession; it is likewise an injury to each journal. Subscribers have a right to expect from any publication that it shall furnish them new and original matter —not duplicates and rehashes, padded with weak platitudes, and devoid of point or pith. Such procedures would not be tolerated in any form of literature except medical, and even now, in any other country save the United States, would tend to the everlasting disgrace of both author and editor.

If medical journals, in their need of original papers, are obliged to rely upon the free and callow contributions offered in the interest of self and undeserved publicity, then the sooner these publications suspend the better it will be for the moral tone of their editors, publishers, subscribers, and for the good name of the authors who are silly enough to imagine such notoriety tends to elevate professional character.

Another literary question extremely pertinent to the medical profession is that of ownership of papers read before medical societies. It is no uncommon affair for the author to send duplicate, triplicate, quadruplicate, and even more copies to as many different journals as a measure of self-advertisement. This is certainly wrong; if a paper is of sufficient value to read before a medical society, and is accepted by said society, the latter by all means should have the disposal thereof. We believe it is perfectly right, however, that any author of a paper should publish it in one medical journal, since the issuance of transactions is usually greatly delayed; but even here the permission of the society should be first sought, and in the majority of cases would undoubtedly be granted.

There is just as much reason for honesty in medicine as in any other form of literature. It is outrageous that medical journals are overwhelmed with contributions of most mediocre character, many being bald advertisements of patent or proprietary remedies; and when such authors assume the rôle of teachers, the disgrace brought upon a noble profession is doubled; and it is authors of this class that have pretty nearly driven out of literature those whose age and experience, medical and literary, entitle their opinions to thoughtful consideration.

It is only within a few days that a medical editor made a great hullaballoo because an article offered to his journal appeared in another; and his pen was scarcely dry before he deliberately committed a like breach of literary morals by sending a paper to no less than five different journals, being actuated no doubt by the pecuniary interests he had in a proprietary remedy which he sedulously puffed.

Is it not full time the profession purged itself of these most dangerous and egotistical forms of quackery?

THE ANIMAL-EXTRACT IMBROGLIO.

The following is taken from the *National Druggist*, and affords a full account of the situation past and present:

The litigation which has been going on for

about a year between W. A. Hammond and the Columbia Chemical Company took a new turn recently, when Hammond filed a cross bill. The part that Hammond and the Sanitarium Company have played in this case is not a very flattering one, and the Columbia Chemical Company, besides having law on their side, have the sympathy and support of the entire community. Hutchinson, of the Hammond Sanitarium, was requested by the Associated Trade and Industrial Press to make a statement in regard to the case, but declined on the advice of his attorney. The facts have been gleaned from the court records.

Hammond made a contract with the Health Restorative Company, which was the predecessor of the Columbia Chemical Company, and which was located at No. 80 South Fifth avenue, New York. This company acquired from Thurber, Whyland & Co. the ownership of "Restorative Wine of Coca" and certain other preparations which at that time Thurber, Whyland & Co. had been selling under a royalty arrangement with Hammond. When the animal extracts were discovered and placed before the medical profession, in the spring of 1893, the Columbia Chemical Company was organized to exploit these remedies. It absorbed the Health Restorative Company, giving the stockholders of that company share for share for their holding. After this was done, the stock book showed that Hammond owned $450,000 out of $500,000 of the capital stock of the Columbia Chemical Company. During the years 1894-95, the control of the company passed from Hammond, and by February, 1895, he had parted with his entire holding of stock in the concern for cash. He, however, had compelled the Columbia Chemical Company to enter into a royalty contract with him by which he was to receive a certain sum from the sale of each bottle of the extract. After Hammond had sold his stock, and had delivered a large number of bottles of the extract to the Chemical Company, receiving for the same his royalty, he attempted to annul his contract with the Columbia Chemical Company, and to sell the animal extracts from his Sanitarium. When the court prohibited this and sustained the contract as existing between Hammond and the Chemical Company, Hammond, through his son-in-law, Manfredi Lanzi, a former secretary and treasurer of the Columbia Chemical Company, attempted to sell the extracts under the name of the "Animal Extract Company." The court stepped in again and restrained this concern from selling the extracts and closed up their business, adjudging Lanzi guilty of contempt and fining him. Thereupon Hammond came into court (and, by the way, the litigation in this matter has extended over six months, during which time the Columbia Chemical Company have been victorious at every point) with a cross bill, asking that he be relieved of the restraint put upon him by the court, and that his contract with the Columbia Chemical Company be dissolved. This the court refused to do, and held Hammond firmly to his contract.

This fully vindicates THE MEDICAL AGE as to the position it has held toward the so-called "animal extracts" and the promotor thereof. It was a foregone conclusion that "truth must out," and that the "Great Retired" would be hopelessly entangled in the web of his own weaving. We now bid farewell to the whole matter, feeling assured that this individual is in fair way to reap the just reward of his unprofessional deeds.

EDITORIAL NOTES.

Amenorrhœa.—

Doctor Marshall, in the *British Medical Journal*, declares Potassium Permanganate acts with certainty in seventy per cent. of cases—a statement which we are inclined to dispute on the ground of personal experience. He administers two hours after eating, and obviates all disagreeable effects upon the stomach by employing a powder embodying one-sixth grain cocaine hydrochlorate, one-tenth grain ipecac, one grain cerium oxalate, and five grains bismuth subnitrate.

First, we fail to understand why both bismuth and cerium should enter into the composition, since their effect in this instance would be identical; second, it would appear as if the cocaine alone would be amply sufficient—providing it would not be neutralized by the permanganate, which is certain to be the case. Perhaps suggestion may secure the results Doctor Marshall claims, for in no other way can they be accounted for under such treatment.

Plain Language Needed.—

Mr. Angell, the anti-cruelty apostle, in a recent issue of *Dumb Animals*, relates an experience he had in a country church:

> In the prayer the clergyman asked the Lord to enable us to do our duties not in a *perfunctory* manner.
>
> In the sermon he spoke of *ethics and economics*, *encyclopædic man*, *speculative orthodoxy*, *psychology*, *isosceles triangle*, *unifying force from the great Universal Self*, *elaborate scheme of social organization*, *Antinous and Apollo*, *complex realism*, *sociological expansion*, and *the old skeleton of a defunct philosophy*, etc., etc.

What can be done with such a preacher?

The Index Medicus.—

In addition to the subscriptions heretofore acknowledged, the following have been received:

Total up to October 10th	$2675 00
Pathological Department Rush Medical College, Chicago, Ill.	25 00
Columbus Medical Library, Chicago, Ill.	25 00
Harold N. Moyer, M.D., Chicago, Ill.	25 00
McGill University Medical Library, Montreal, Canada	25 00
E. C. Seguin, M.D., New York City	25 00
Total	$2800 00

Why Remove the Testicles?—

Doctor J. T. Jelks says: "In view of the fact that in operating for senile cystitis the relief obtained comes from the effect on the nerve, and not from the removal of the testicles themselves, I favor resection of the nerve which lies in the spermatic cord. I believe in saving the testicles in every case, if possible, for, while they may have ceased to be useful, they may still be considered by their owner as ornamental."

"False Premises, False Results."—

Beginning with bacteriology, all the pernicious and erroneous teachings which have grown out of this great mistake in the law of cause and effect are based upon dogmatic assertion. The distorted and valueless experiments made upon animals cannot weigh in the balance scale as against the utter absence of clinical cures.—*Medical Brief.*

Is it not time "faddism" and the medical errors thereby engendered were done away with?

Anent Typhoid.—

One of our India exchanges claims that typhoid fever cases in the Orient are being successfully treated with chloroform and carbolic acid internally.

Is This True?—

The *Hahnemannian Monthly* emphatically declares that "the law of similars is the only essential part of homœopathy."

Suggestive Criticism.—

A late author and critic classifies modern novels as the "erotic, necrotic, and damrotic."

Items and News.

The Price of Professional Honor.—

American medical and pharmaceutical journals throw caution and ordinary business sense to the winds when it comes to recommending and puffing drugs and preparations bearing a foreign name and recommended by foreign authority. The success of one or two German products of synthesis opened the doors for a flood of *tines*, *rines*, *ols* and other "antis" that come covered with patents of names, of processes of manufacture, of ingredients, of modes of dispensing, of package, of label—in short, of everything that a patent can be made to cover. They are patent medicines in the very widest and strictest sense of the word; and yet they are received with enthusiastic welcome by press and practitioner, are given *gratis* and gladly advertisements that money could not purchase for a home product though ten times more valuable and not one-tenth so much patented.

One of the proprietors of a drug of this sort, recently established in America, on being approached by the advertising solicitor of an American medical journal, answered very curtly "*they didn't have to advertise their article. They got all the advertising they wanted for nothing, in the shape of laudatory communications in the reading matter of the medical journals*"—which was true, every word of it, and that too in spite of the fact that it was a patent medicine. *The very journal for which the agent was soliciting, and in the very copy which he carried as a specimen, contained no less than six laudatory notices of the drug in question—one of them a communication covering several pages and heralding its virtues in almost every known form of disease.*

It is not true that these patents are so valuable that the profession must have them and must use them, secret nostrums though they be.—*National Druggist.*

[Even more! There is not one that is not inferior to one or more agents that have long been and still are common to the materia medica; the tempting promises held out by their proprietors are based entirely on the most superficial observations of irresponsible people—observations that at best are hired and paid for, with no option toward negations. The most vulgar of English and American patents adduce equally valuable evidence, but not perhaps at the price of the virtue of so many professional people, who

are led by the tempters to believe they thereby attain a short cut to reputation and popularity.—Ed.]

A Valuable Tooth-Paste.—

No doubt our sailors need all the attention paid to their teeth which is possible, and here is an advertisement in Japanese-English which was widely circulated in English ships:

In the East there was no good sanitary tooth paste was sure to cure and safe to use, so our company resolved to prepare a good natured paste and successed. The efficiencies of this paste are as following:

Firstly, to strengthen and preserve the nature of the tooth: Secondly, to tight the tooth with thingams: Thirdly, to defend a hemorhage arisen by frictrir: Fourthly, to take away the offensive smell of the mouth: Fifthly, to difent the putrifaction of tooth and so prevent the carious one. Any one who uses this paste will certainly discover that it is of a very wonderful and valuable nature, by his practice.

To use this paste, it is necessary to vinse the mouth will walir aftr sabling the tooth carefully by the tooth brash.

A good-natured paste which has successed ought certainly to tight the tooth with thingams, if not with thingambobs, and to prevent the carious one; but how is it, however good-natured, to defend a hæmorrhage, however arisen? And how is the tooth sabled? Oh, mysteries of English as she is wrote!—*British Journal of Dental Science.*

Bromidrosis.—

According to Tragon, Louis XIV. suffered from fœtid feet to such a degree that the worst courtesans in Paris fainted away therefrom in his presence. Henry IV. had the same redolent perfume, but this did not prevent the diplomatic Queen Marguerite from occupying the same couch; and she pardoned her liege lord's legendary infidelity as well as the loud odor of his royal toes. One day he was so redolent that Madame de Verneuil, one of his court favorites, said to him: "Sire, it is fortunate you are a king; without that your presence would not be tolerated—you stink worse than carrion."

The German soldiery are notorious for bromidrosis, and are obliged by law to use a deodorant powder of salicylic acid on their odorous and tyrannical feet.—*Medical Recorder.*

Leaden Forceps.—

In a very interesting communication by Doctor Luigi Sambon to the *British Medical Journal* an account is given of the ancient custom of making offerings to the gods. Many of these *donaria* were thrown into the water at some hot or mineral spring in which the patients bathed or from which they drank. In the temples of healing gods were gathered surgical instruments, pharmaceutical appliances, or images of various parts of the human frame shaped in metal, stone, and terra cotta. Amongst the surgical instruments offered by patients and surgeons as a thanksgiving, a quaint one is described which will doubtless appeal to the conservative dental surgeon. It is recorded that Erostratus offered to Apollo, in the temple of Delphos, a forceps of lead to show how little he approved of the extraction of teeth which were not loose enough to be pulled out by the fingers.—*British Journal of Dental Science.*

Big Words.—

There used to be a clergyman in the old town of Newbury, Mass., somewhere back in the last century, who was famous for his big words. On one occasion he was invited to preach at Harvard College. In those days they used to have two sermons a day. The students listened to him in the morning, took in all the hard words and quotations, and put their heads together. In the afternoon they appeared in the chapel, each with the largest dictionary he could command, and when the preacher used the first word out of the common course there was such a rustling of leaves that the reverend gentleman looked up in alarm. He was bright as well as erudite, however, and, seeing the point, translated his words as he went along.—*Our Animal Friends.*

Therapeutic Failures.—

The serum treatment of pneumonia has proved disappointing, and it is generally admitted that abortive measures for this disease are failures; tonics are still the mainstay. Of tuberculosis it is hardly necessary to say that most practitioners prefer to rely upon climate and hygiene rather than upon tuberculin or any of its modifications. Regarding health resorts, medical men should not advise a residence where the patient cannot find means of subsistence, no matter how promising the change of climate. Constant protests come from health resorts against the sending of consumptives without means to places where they either can make no living at all or must work so hard for mere subsistence that they break down under the strain.—*Southwestern Lancet.*

An Unselfish Offer.—

Doctor E. A. Woolsey, of California, says it is useless to establish quarantines or take

other steps to check the propagation of disease while dirty paper money continues to circulate.

We have always felt that we were capable of heroism in an emergency, and should this announcement create a panic, we wish to go on record as being perfectly willing to take all this dirty money off of the bacteriologists' hands without remuneration.—*Exchange.*

Unjustifiable Experimentation.—

Von Bergman, during a clinic, pressed upon a spina bifida, to demonstrate that slowed pulse, asphyxia and coma are caused by driving the cerebro spinal fluid in the tumor upwards in the central canal, through the opening in the pia mater at the floor of the fourth ventricle and into the sub-arachnoidean space. The asphyxia was so complete that the child could not be revived, and death ensued.—Berlin Correspondent of the *Indiana Medical Journal.*

A Nail in the Skull for Thirty Years.—

For thirty-two years Francis Mellon, who recently died in a Blackwell's Island hospital, managed to exist with a lath-nail driven through the crown of his head. He suffered no apparent inconvenience, and had it not been for the autopsy no one would have known of the presence of the nail. The skull, with the nail driven through the thick bone, is now among the hospital's collection of curiosities.—*Medical Review.*

Vaccination.—

The opponents of this most beneficial measure have only to enter Italy and witness the frequent outbursts of smallpox, and its ravages amongst the rural population, to be taught a lesson of its value. Blindness from smallpox, almost totally stamped out in England, finds frequent victims still in Italy, where vaccination is only done sporadically amongst the country people.—*Journal of Medicine and Science.*

Black Witchcraft.—

A fearful case is reported from Ireland, where a woman was boiled or roasted to death under the impression that she was "fly" or a witch of vicious predilections.—*Indian Medical Record.*

Disappointments.—

The greatest disappointments in progressive medicine within the last decade have originated in Germany and France.—*Medicine.*

Book Reviews.

ANNALES D'OCULISTIQUE. Price, 50 cents; $5 00 per year. The Transatlantic Publishing Co., New York.

In the *June* issue George T. Stevens writes of "Double Vertical Strabismus and Lesser Symmetrical Deviations;" Doctor Roure, of "Myopia, Central Cataracts, and Central Leucomas;" Doctor Fromaget, on "The Relation of the Amplitude of Accommodation to Static Refraction;" L. de Wecker, on "The Use of Large Subconjunctival Injections;" H. Audeoud, on "Hereditary Nystagmus;" H. Armaignac, on "Traumatic Paralysis of the External Rectus."

July: "Contribution to the Study of Œdematous Optic Neuritis of Intra-cranial Origin," by H. Parinaud; "Electrolysis in Extraction of the Retina," by Doctor Terson; "Considerations upon Thalassotherapy," by Doctor Dianoux; "Slight Effects of Tenotomies of the Ocular Muscles, the Indications and Advantages of Tendon Contractions," by Doctor George T. Stevens; "Methodic Curetting of the Cornea in Pterygium," by Doctor Deschamps.

August: "On the Curability of Sympathetic Uveitis," by Doctor Rogman; "Ætiology and Treatment of Infectious Ulcers of the Cornea," by Ch. Abadie; "Internal Sclerotomy," by L. de Wecker; "Ophthalmoscopic Examination with the Inverted Image in Highly Myopic Eyes," by L. Demicheri; and "Endothelial Sarcoma," by O. Parisotti. There are the usual Reports of Societies, Reviews of Ophthalmological Journals, Book Notices, etc.

This English edition of a well known French journal proves a veritable thesaurus to Anglo-Saxon physicians and specialists.

LITTELL'S LIVING AGE. Price, 20 cents; $8.00 a year. Littell & Co., Boston.

The four weekly issues for September are replete with the choicest gleanings from the British reviews and magazines; they contain twenty-seven complete papers, many of great value and intense present interest. Among the more valuable essays and reviews may be mentioned "Norway and Sweden," by J. E. Sars (Professor of History in the University of Christiania) and Carl Siewers. "The Problems of the Far East," by Honorable George P. Curzon, M.P., Henry Norman, Chester Holcombe, and others, is an able review of the China and Japan question. Biography is represented by an exceedingly fine article on "Huxley" by P. Chalmers

Mitchell, and another on "Mrs. Gaskell" by Mat Hompes. "The Spectroscope in Recent Chemistry" is by R. A. Gregory; "Stars and Molecules," by Reverend Edmund Ledger; "A Visit to Bonifacio," by J. N. Usher. "Antarctic Explorations," "In the New Zealand Alps," "Poetic Pride," "Latter Day Pagans," and "The Heavy Burden of Empire" are the titles of valuable papers. In fiction each number contains a complete story, and of poetry a full page. *Littell's* presents a maximum of high-class literature at a minimum price, and should be in every household.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

In the October issue Colonel G. T. Denison contributes an article on Lord Wolseley, "The New Commander-in-Chief;" Goldwin Smith criticises "The Canadian Copyright Bill;" Arthur Inkersley depicts "Rambles around Esquimault and Victoria;" a charming story is "In Arcadie," by Gertrude Bartlett; Jack Alexander writes of "The Phrase that Most Influenced Me," Reverend H. Scadding of "Surveyor-General Holland;" "A Tale of Ter-rew Love Triumphant" is by Keppel Strange, "Chinese National and Religious Characteristics" by J. C. Hopkins, "An Imperial National Currency" by W. M. Gray, "The Love Story of a Pope" by Kinmount Roy, "Our Western Heritage" by G. H. Ham, "Isabella Valancy Crawford" by E. J. Hathaway, "An Estimate of Canadian Women" by Stephen Blackburn. The poetry of the number is by Mary Markwell, Keppel Strange, Wyndom Browne, J. W. Watson, John McCrae, and Philip Lawdeshayne.

SUN AND SHADE. Price, 40 cents; $4.00 per year. New York Photogravure Co., New York.

The most notable features of the February issue are: "In the Woods," by the well known artist R. M. Shurtleff—reproduced in colors by a new process, and which represents a view on the road to Au Sable Lakes. "R. M. Shurtleff," a photogravure from a photograph by Sarony; "A Living Picture," also a photogravure from a photograph by Schloss; "Marine View," from a painting in the gallery in The Hague by W. Van de Velde; "Doin Tallin," from life, by W. J. Chambers; "Sheep," from a painting by Charles Jacques —one of the few pictures of animals that retain the individuality of each figure; "Falls of Minnehaha," from nature, by H. L. Ide—few pictures of these falls are worthy of attention, since artists generally select the period when the water is high, but this, being a winter scene when the stream is low, affords a beautiful display of icy stalactites; "Shakespeare's Monument"—the memorial erected by the late George W. Childs at Stratford-on-Avon. On the whole the February is one of the best numbers that has yet appeared of this delightful magazine.

The September number contains: "At the Spring" (color-printing process), from a painting by Will H. Low; "Will H. Low" (photogravure), from a photograph by Davis and Sanford; "A Vantine Vase" (color-printing process), from the original; "Governor Bradford's House, 1621" (photogelatin), from an engraving by L. W. Williams; "Common Objects of the Seashore" (Snap Shots of the Camera in Coney Island), by Ernest Edwards; "Second Cataract of the Nile" (photogravure), from a photograph by Edward L. Wilson, of New York; "The First Step" (photogelatin), from a photograph by W. J. Chambers; "A Type of Beauty" (photogravure), from a painting by P. A. Calderon, R.A.

THE MONIST. Price, 50 cents; $2.00 per year. The Open Court Publishing Co., Chicago.

In the October issue the late Professor George J. Romanes, "upon whose shoulders the mantle of Darwin fell," considers the question whether natural selection has been the *sole* or but the *chief* cause of the progressive modification of living forms; he thinks Darwin's view, which admitted *all* factors, but laid chief stress on natural selection, will eventually prove the most accurate of all. Paul Topinard seeks to determine man's place in animate nature. Another important article is "Some Applications of Criminal Anthropology to Practical Education." G. Ferrero writes on "Arrested Mentation;" Professor C. Lloyd Morgan on "Naturalism;" Doctor Paul Carus on "The New Orthodoxy;" Doctor Woods Hutchinson on "The Fifth Gospel." Some sixty books on philosophy, science, psychology, ethics, the history of religion, etc., are likewise reviewed, not to mention *résumés* of the contents of all the most prominent philosophical periodicals.

NORTH AMERICAN REVIEW. Price, 50 cents; $5.00 per year. North American Review Company, New York.

The October number contains: "Politics and the Insane," by Doctor Henry Smith Williams; "Birds in Flight and the Flying Machine," by Hiram S. Maxim; "Some Prob-

lems of the Age," by the Very Reverend F. W. Farrar; "The Microbe as a Social Leveler," by Cyrus Edson, M.D.; "A Study in Wives," by Max O'Rell, Grant Allen, Karl Blind, and H. H. Boyesen; "Future of the Arid West," by Honorable E. G. Ross; "English Women in Political Campaigns," by Lady Jeune; "The Liquor Question: Environment and Drink," by Doctors J. F. Waldo and David Walsh; "The Saloon and the Sabbath," by Reverend F. C. Inglehart; "Personal History of the Second Empire"—The Causes of the Mexican War, by Albert D. Vandam; "Hunting Large Game," by General N. A. Miles; "Is Socialism Advancing in England?" by W. G. Blaikie; "Notes and Comments," etc.

THE DECORATOR AND FURNISHER. Price, 20 cents; $2.00 per year. The Art Trades Publishing and Printing Co., New York.

The September issue, which concludes the twenty-sixth volume of this delightful magazine, is especially interesting. Under the title "Amateur House Decoration" we find described "A Yellow Luncheon" by Hester M. Poole," "Fancy Furnishings" by F. L. Maremzane, "Schemes for Painting the Exteriors and Decorating Interiors." Under "Furniture and Furnishings" are taken up the subjects of "Poker Work Decoration," "Lady's Work Table," "Hanging Cabinet Chair," "Oval Mantel and Sideboard." Another interesting contribution is a paper upon "American Decorative Sculpture." Mrs. N. R. Monachesi writes gnostically on "Porcelain, Pottery and Glass;" "Decorative Textile Cloth of Japan" is by E. Curtiss; "Japanese Drapery," by E. Patterson. Under "Mural Decorations" are described the latest designs in wall papers.

THE NEW SCIENCE REVIEW. Price, 50 cents; $2 00 a year. The Transatlantic Publishing Company, New York.

The October issue offers an exceedingly interesting array of papers. Homer Greene treats of "The Formation of Coal;" C. D. Wilson of "Domestication of Animals;" A. E. Bostwick of "Four-Dimensional Space;" A. H. Gouraud of "The Herring's Mysterious Migration"—a paper of especially great value to naturalists; Charles Morris of "Power Without Cost;" E. P. Lewis of "The Nature of Solutions;" Lieutenant F. J. Patten of "The Past and Future of City Traction;" F. B. Wilson of "Genius;" J. E. McLean of "Vivisection"—a paper that should be read by every medical man. Another contribution that we desire to call attention to, one that should be perused thoughtfully by every medical practitioner, is "Medical Education in America," by John Madden, M.D.

THE BRITISH GYNÆCOLOGICAL JOURNAL. Price, 3s. 6d. Hirschfeld Brothers, New York.

The August number of this classic is exceedingly valuable. Besides the details of the meetings of the British Gynæcological Society in May and June, there is a very valuable discussion on "Pregnancy;" "Report of Two Uteri removed by Hysterectomy," by Christopher Martin (with discussion); Collins on "Impacted Ovarian Cyst;" Fancourt Barnes on "Difficulty in the Use of the Curette" (with discussion); "The Radical Cure of Uterine Prolapse," by Frederick Edge; "Contracted Bladder Treated by Dilatation," by Mayo Robinson; "Sessile Intra-ligamentous Suppurating Ovarian Cyst," with account of operation, by Leith Napier. There are the usual reviews and reports of societies, with an exceedingly valuable editorial on "The Operation of the Future for Pelvic Diseases."

THE GLOBE QUARTERLY REVIEW. Price, 50 cents; $2.00 a year. Globe Publishing Co., New York.

The July issue of this estimable quarterly contains a comparative discussion upon "English and American Culture," by W. H. Thorne; "Before the Resurrection," by M. F. Egan; "The Resurrection of Tammany," by W. R. Claxton; "Edward VI. and the Marian Age," by T. E. H. Williams; "Balfour's Foundation of Belief," by J. H. Ward; "Catholica et Apostolica Ecclesia," by E. C. Shipman; "William Penn and the Quakers," by W. H. Thorne; "Modern Orient and Occident," by George P. Lathrop; "The Homeric Epics in Art," by Eugene Parsons; "The Negro in Fact and Fiction," by Eugene L. Didier. The poetry of the number is by W. H. Thorne, W. R. Claxton, O. H. P. La Farge, and L. J. Block.

OVERLAND MONTHLY. Price, 25 cents; $3.00 a year. Overland Monthly Publishing Co., San Francisco.

The issue for October contains: "An Iconoclastic Episode," by Emma M. Newton; "Charles Warren Stoddard," by Joaquin Miller; "Sons of the American Revolution," by Frank E. Myers; "Schools in Hawaii," by W. R. Castle; "The Irrigation Problem in California," by W. S. Green; "The Quicksands of Pactolus," VIII–IX, by H. A. Vachell;

"Powder-making on the Pacific Coast," by W. C. P.; "Inanimate Target Shooting," by M. C. Allen; "Smokeless Powders for Shotguns," by W. L. Colville; "Book Reviews," "Chit Chat," etc.

Donahoe's Magazine. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

The October number is freighted with a remarkable variety of excellent things, among them "The Irish Play and the English Stage," by Reverend John T. Smith; "The Leading Men in Canadian Public Life," by Thomas O'Hagan; "Leaders of Men," by Mary E. Blake; "Buddhism versus Christianity," by Mgr. Charles de Harlez; "The Modern Conclave," by Bernard Morgan; "Great Talkers," by B. B. O'Reilly; and "The Catholic Winter School of America," by C. F. O'Leary.

The History of Prostitution. By William W. Sanger, M.D. Cloth; 8vo; pp. 709. Price, $4.00. The American Medical Press, New York.

The first edition of this work appeared nearly half a century agone, and, though it attracted widespread attention in certain circles, in the main it was discouraged and condemned, and its author vilified, which doubtless accounts for the fact no subsequent editions were issued until the present. It is not only a complete review, historically and otherwise, of prostitution, but deals with the causes that lead thereto, and the means essential for its regulation—for, it cannot be denied, attempts at suppression ever have, and ever will be, futile.

Of all the arguments that have been advanced regarding the causes that lead to this evil, none have recognized its keystone. Even in modern society the "one law for the man and another for the woman" has done more to uphold the vice than anything else which is attached to our sociology. Inhumanity and illiberality are to-day, as they ever have been, the chief cause of depravity and misery in woman; and to this may be added the idea especially engrafted upon young American women that it is their duty to appear socially what they are not, and that the most impecunious shall vie with her sister of the brownstone front. Indeed, it is notorious that many mercantile establishments tacitly favor clandestine prostitution by encouraging young women to enter their employ at such meagre incomes that an honest life is practically impossible.

Doctor Sanger's work is one of the most important contributions to sociological literature. It should be perused by every student of social science, and has the special merit that the author deals fairly and candidly with his subject, avoiding those pruriencies which in modern days are considered so essential to the financial success of works of this class.

Nervous Diseases. By American Authors. Edited by F. X. Dercum. Cloth; 8vo; pp. 1052. Price, $6.00. Philadelphia: Lea Brothers & Co.

This is the latest publication dealing with nervous maladies, and Doctor Dercum has had the assistance of no less than twenty collaborators of first rank in the profession—notably N. E. Brill, C. W. Burr, Charles L. Dana, Landon C. Gray, W. W. Keen, P. C. Knapp, S. Weir Mitchell, William Osler, and James C. Wilson. It is manifestly the purpose of this volume to simplify the subject and remove those difficulties which have hitherto hedged about all forms of nervous maladies. Beginning with the very foundation—anatomical and physiological—of nervous science, it proceeds to ætiology and general management. Thus it is adapted not alone to the needs of the practitioner, but as well to the student. The illustrations are especially commendable both as to original character and number; there are 341 engravings and seven colored plates.

As a whole the work is a representative American volume, alike in the theme and the manner in which it is handled, the authors and the educational institutions which they honor, and the form in which the information is presented.

Cutaneous Medicine. By Louis A. Duhring. Cloth; 8vo; pp. 221. Price, $2.50. J. B. Lippincott Co., Philadelphia.

This is Part 1 of a systematic treatise on diseases of the skin by this well known author. It is the beginning of a series that will supplement this author's earlier works, and will replace his "Practical Treatise on Diseases of the Skin," which for several years has been out of print. It deals with the anatomy and physiology of the skin, general symptomatology, ætiology and pathology, general diagnosis, treatment and prognosis, and is exceedingly well illustrated. The material embodied on all sides has been approached from a practical standpoint and is the result largely of personal clinical observation, and researches in skin anatomy and pathology. The principles of therapeutics, moreover, are laid down upon the more conservative lines of modern research and experience, yet the remarkable changes in pathological views that have accrued to dermatology during the last decade are fully presented.

Therapeutic Brevities.

Typhoid Fever.—Some recent writers state that typhoid fever is always the result of drinking contaminated water. While this may be *a* cause, it is not the only one. I have often seen the disease go through families where they used as pure water as ever ran out of the hills and mountains—where there was no contaminating matter whatever.

I have treated typhoid fever for twenty years or more, and often could not find any cause for the disease, except an accumulation of trash under the houses, which houses were on the soil or very near the ground. I noticed that typhoid fever always started from old houses where the filth or trash had been in a state of decomposition for years. This zymotic poison may originate from decomposing vegetable or animal matter.

This specific virus has a direct affinity for the spleen and bowels, especially for the lower part of the ileum and upper part of the colon. This poison produces a necrotic inflammation and infiltration of the follicular structures and adjacent parts, called "Peyer's patches." And there may be catarrhal inflammation of the rest of the mucous surface. Not only is there diarrhœa as a result of this poison, but typhomania, stupor, etc.

The treatment by cold water and turpentine emulsion failed to cut short the disease, —it may have saved some lives by modifying the virulence of the malady, but it was far short of being successful: for while cold water, externally and internally, is pleasant to the patient, it does not antidote the poison.

The sulpho-carbolate of zinc and the sulpho-carbolate of soda have proved to be the most efficient remedies yet tested. The *Baptisia tinctoria*—wild indigo—has proved very active as an anti-zymotic. I have treated several cases (well marked typhoid fever) recently with the baptisia and sulpho carbolate of zinc, alternated. I give fifteen to thirty drops of the tincture of baptisia four times a day, and five to six grains of the sulpho-carbolate of zinc between times.

I have the body washed with a warm solution of chlorate of potash, once or twice a day in winter, and a cold solution in summer. The diet should be fluid, and, where the patient refuses milk, chicken essence or soup may be given. Predigested food is a good diet for the patient. Try this treatment, and you will succeed in aborting this tedious disease.

Some cases, if seen at the outset, may be checked the seventh day. I know the profession are not prepared to receive this statement, but I ask a fair trial on the part of all, and especially of the incredulous.

If diarrhœa sets in, I restrain it with compound syrup of rhubarb. If hæmorrhage sets in, I use two grains of Monsell's salt every two hours.

For typhomania, I have found three or four minims of belladonna, once or twice a day, sufficient to counteract this condition. And if this fails to produce sleep, a dose of codeine may be given at night to promote rest, sleep, and quiet.

Now I write this to save life and to prevent long suffering of typhoid patients. Under the old treatment I have often seen them lie forty and sixty days, and sometimes die at last. I hope the profession will try this treatment. —I. J. M. Goss, in *Medical Brief.*

Fistula in Ano.—In anal fistula it is conceded that if the fæces could be taken away by a large catheter in the rectum, the main trouble would be easily remedied. Few of us but have witnessed the healing of large urinary fistulæ, by having the bladder emptied often and so effectively as not to allow the urine to pass into the false opening.

Reasoning by analogy, I advise that the bowels be kept gently open by compound liquorice powder, a teaspoonful every night, thus imitating the action of the catheter. I also enjoin that, at each stool, the patient throw into the bowel some tepid water in which a little soap is dissolved, and that when the sitting is completed the end of the bowel should be well washed with the same fluid. The fæces are, by this means, carried quickly and easily through the gut, and there is the nearest thing to a safeguard against the foul discharge entering the internal opening of the fistula, or lying in a decomposing state so close to it as to prevent healing.

My results have been marvellous. I have never seen a case with an internal opening, excepting two of recto-vesical fistulæ, in which this procedure was not satisfactory. In cases with considerable false membrane lining the fistula, I pass into the bottom of the tract a lint shred, dipped in acetum cantharidis, to be drawn out when the itching set up becomes very severe, which answers most admirably. I have no doubt as to the utility of the rectum-cleansing treatment, in every case, and I am sanguine that with gentle stimulation to the bowel, and the judicious application in some cases of acetum cantharidis, the barbarous, painful, comparatively dangerous, and on the whole unsuccessful treatment by the knife will, if not altogether abandoned, be relegated to those rare cases which will serve to

recall as much as anything else the history of past rectal surgery.—Doctor Tucker, in *Massachusetts Medical Journal.*

Diet in Typhoid Fever.—The thermometer is of incomparable use as a guide to feeding typhoid-fever patients. The time to push food is during the intervals when the temperature is lowest, since at that time digestion and assimilation are most active and food does most good; when temperature is highest these functions are much in abeyance. I find it best not to crowd food, yet often when the heart and respiration are weakest during high-temperature periods a vast deal of good can be accomplished by giving the patient rich beef-essence diluted with an infusion of green or black tea of best quality. This sort of food, which serves an excellent purpose during these periods of great depression, is stimulant to the ganglionic nerve-centres; the cold bath, too, has here a wonderfully benign influence, backed up with proper food.

A soft-boiled egg is a valuable food, relished by many fever patients at certain times.—Put a fresh egg in a large tea-cup, pour full of boiling water, let stand covered from four to six minutes, when both yolk and white will be sufficiently cooked; season to taste, and add a little onion-juice to liven the flavor. Some patients will take the whole at a meal, others only a part.

Bake a ripe apple, and feed the soft pulp. This is an admirable change, besides being easily digested and a good philippic to the stomach.

Pap is made by rubbing up to a smooth paste two or three tablespoonfuls of first-class flour in water to the consistency of cream. Pour this into a mixture of equal parts of boiling milk and water; stir and cook slowly for half an hour. This has high proteid and carbon values, serving an excellent part as food, used also as a diluent of bouillon and essence. In the meantime be sure the patient is made to drink sufficient water during the day and night—do not wait till it is called for, but force it on him if necessary; even half a wineglassful often repeated is certainly good for him.—Joseph Adolphus, in *Chicago Medical Times.*

Rational Treatment of Epilepsy. — I have given a vast amount of thought and study to this disease, and have come to conclusions which are new and somewhat startling, but nevertheless incontrovertible. I employ atropine sulphate, one grain, and one drachm of a one-per-cent. solution of nitro-glycerin in a half-ounce of 96-per-cent. alcohol, giving from three to five drops of the combination in water three times daily, three hours after meals.

The dose may be increased, with caution, but only as the physician directs. In some cases it has been gradually increased to ten and twelve drops, due heed being given to its physiological effects in every instance. Each drop of the solution contains $\frac{1}{600}$ grain of atropine sulphate, and one-fifth drop of the one-per-cent. solution of nitro-glycerin.

An epileptic attack has two distinct phases: a sudden anæmia of the brain produced by some unknown cause; followed quickly by an intense congestion with its concomitant symptoms such as convulsions, etc. There is no doubt that vaso-motor spasm causes the cerebral anæmia; but what is the cause of the spasm and the subsequent dilation, has so far eluded all research. Yet the propriety of using an antispasmodic for the first phase (and an arterial stimulant in the second) to relieve the spasmodic anæmia of the brain, is unquestionable; this is most readily effected by my combination of drugs, which by its continued action prevents, or at least hinders, the frequent recurrence of the symptoms, hence wards off subsequent congestions as well.—Doctor Timmerman, in *Alkaloidal Clinic.*

Sodium Salicylate in Rheumatism. — Three principles should never be forgotten: No prescription in large doses at the commencement of a polyarticular rheumatism: The division of the doses: The continuation of the remedy after the relief of pain.

At the outset the dose should be ninety, sometimes even one hundred and twenty grains. The average dose of ninety grains should be maintained for about two days, then diminishing fifteen grains each day until sixty grains is reached. These large doses are necessary because the drug is useful the more acute and recent the disease is, and because early treatment certainly prevents cardiac complications. Divided doses are advisable because of the rapid elimination of the drug; in this way only can the effect be made more lasting and complete. For this purpose direct fifteen grains to be taken every two or three hours; further, it should be prescribed for at least twelve days after the pain has been relieved. It should be dissolved in a definite quantity of liquid—an alkaline water; being a local irritant, it should never be administered in concentrated solution. In case of pregnancy it should be administered cautiously in divided

doses. The albuminuria of rheumatic origin is not a contra-indication to the use of this drug, but when it precedes the rheumatism, and especially when it is due to a renal lesion which impairs the permeability of the kidneys, the Sodium salicylate is contra-indicated, though the dangers of its use have been exaggerated.—*Journal des Practiciens.*

Liquor Potassæ in Chloral Poisoning.—Whatever facts or theories there may be regarding the *modus operandi* of the hypnotic and anæsthetic action of chloral, there can be no doubt about its chemical composition and affinities, and, in particular, that it is almost at once decomposed, at and above 60° F., outside the body, by an alcoholic solution of KHO, and somewhat less quickly by an aqueous solution of the alkali. Therefore, assuming that a person has swallowed a poisonous dose of chloral—say eighty grains, as was done inadvertently by the late lamented Professor Tyndall—and that there could with safety be given as a chemical antidote twenty-seven grains of KHO, this amount being the quantity by weight required to decompose eighty grains of chloral,—there are strong *a priori* grounds for assuming that in about fifteen minutes the chloral would be entirely changed into formate of potassium and chloroform, or, at least, that so much of it would be decomposed that the residue would be harmless. As a matter of practice I would give, in such a case as Professor Tyndall's, 220 minims of Liquor Potassæ—equal to fourteen grains of KHO—highly diluted in warm milk, gruel, or barley-water, in two doses, an hour apart. If this were given before the patient was too far gone, the amount of chloral in the system would soon be reduced to a quantity quite within the tolerance of an adult, providing there were no heart trouble.—JOHN DOUGALL, in *Glasgow Medical Journal.*

Syrup of Hydriodic Acid.—Every physician, at one time or another, meets with difficulty in the administration of iodine and alkaline iodides, probably having even been compelled to discontinue these valuable therapeutic agents on account of nauseating taste, and tendency to provoke gastric and intestinal disturbance. . . . I now can speak confidently of the superiority of the Syrup of Hydriodic Acid over all other iodides, possessing none of their disadvantages, while retaining in full their therapeutic value. . . . It is superior to potassium iodide, since it does not give rise to the digestive disturbances; further, it is pleasant to take, resembling syrup of orange and lemon—two conditions by far too often not taken into consideration, and that represent a triumph in elegant pharmacy. In none of my cases treated by Syrup Acid Hydriodic have there been any digestive disturbances, or complaint against taking. It is absorbed readily, and iodine compounds can be detected in the urine ten minutes after ingestion. It is eliminated by all the secretions, chiefly the urine, as iodides and iodates.—DOCTOR E. Q. THORNTON.

Professor Reynold W. Wilcox adds that in this drug is had "a palatable and efficient mode of administering iodine. The dosage is under control; it is possible to saturate the patient with iodine, yet iodism can be avoided. The field of usefulness is greater than that of iodide of potash or any other alkaline iodide."—*Pharmacal Notes.*

Poisoning by Male-fern.—Doctor Alkiewicz, of Pobiedzisk, details a very instructive instance of severe toxic effects produced by the internal administration for tapeworm of a rather liberal dose of ethereal extract of Male-fern. The patient, an otherwise quite healthy woman, who, on a former occasion, had been given 150 grains of the remedy without any bad consequences, took this time, at 8 A.M., 300 grains of the extract, dissolved in tincture of cinnamon. During the day she had several fairly profuse stools, and about 6 P.M. she suddenly fell into a deep and prolonged swoon. When seen she was in grave collapse, with hardly perceptible pulse, incessant nausea, retchings, vomiting, tremor of hands, and general restlessness. In about two hours, under the influence of champagne, ice, and black coffee, the alarming symptoms began to gradually subside. The next day she was still weak, and on the third there developed an intense jaundice, which lasted for several days, to disappear spontaneously. Doctor Alkiewicz adds that the maximal dose of ethereal extract of Male-fern for a woman should not exceed 225 grains, and for a man 260 grains; but we should say that such large (and proportionately expensive) doses are altogether superfluous.—*Provincial Medical Journal.*

Pain of Burns.—The immediate relief of the pain of burns and scalds is a matter of practical importance; constitutional shock is thereby lessened and one of the initial dangers of injuries of that class is avoided. A remedy said to have been employed with great success at the Charité Hospital, Paris,

is a solution of Picric Acid. That it is altogether harmless, is a proposition open to some question, since picric acid is toxic to man as to the lower animals, and given internally causes gastric disturbance, rapid wasting, and universal straining of tissues, without elevation of temperature. Applied to a large raw surface resulting from a burn or scald, absorption of a dangerous amount might readily take place. As every one knows, the pain of such injuries may be readily controlled by a solution of bicarbonate of soda, a teaspoonful to the pint of water, which often acts like a charm. Also a weak solution of carbolic acid is nearly or quite as effective and almost instantaneous in action.—*Medical Press and Circular.*

Citric Acid in Urethritis.—Doctor Perlessier employs injections of Citric Acid in one-percent. solution, and also washes the urethra with a solution of eight parts in 1000 or 1500 parts water, throwing from one to two ounces directly into the bladder. The urethral injection is repeated six times daily, and the washing is practiced once a day. The patient usually is discharged cured about the tenth day.—*Revue Internationale de Médecine.*

Soft Chancres.—The pus from soft chancres has been found to lose its virulence at 102° F. This discovery has been applied practically in the treatment of phagedenic soft chancres by bathing the part affected for ten minutes several times a day with water at a temperature of 105°, the results being most satisfactory. The phagedena subsides and the general health of the patient rapidly improves.—*The Practitioner.*

Capillary Bronchitis.—

℞ Ammonium carbonate, 24 grains.
Syrup tolu, 6 drachms.
French brandy, 3 drachms.
Syrup senega, 3½ drachms.
Syrup gum arabic, sufficient to make three ounces.

Give a teaspoonful every two hours.

—*Dominion Medical Monthly.*

Pertussis.—Thymus serpyllum is a specific for pertussis, acts in any stage of the disease, and is also a nerve sedative and gastric stimulant. The action is fully established in twenty-four hours and completed in five days. It is perfectly harmless in doses as large as a teaspoonful of the tincture for a child of eight years.—S. E. Straley, in *American Doctor.*

Medical Progress.

Lesions Produced During Coitus.—These are of importance from a medico-legal as well as a gynæcological standpoint. The hymen may remain intact after coitus, either because the male organ has not penetrated the vagina, as when the solidity of the hymen or narrowness of the vagina prevents intromission, or in cases which present a very elastic hymen with a large opening. Usually, during the first union this organ is ruptured by a single blow, the line of tear being single, double, or radiating from the opening; more rarely the hymen is torn away at its attached margin and remains hanging by one side. In violent intercourse, especially when the hymen is annular and thick, the tear may extend into the vaginal wall. The hymen is not merely a fold of mucous membrane, but contains muscular tissue and may be well supplied with blood-vessels. As a rule the hæmorrhage following its rupture is slight and soon ceases; if serious, the bleeding vessels should be tied; if parenchymatous, a tampon is effectual. The tear usually heals in two or three days, but acute inflammation may arise from infection of the wound or too frequent coitus.

Laceration may occur in the region between the clitoris and the meatus urinarius, or severe hæmorrhage may be caused by rupture of the turgid blood-vessels of the neck of the uterus. Improper formation of the hymen, malposition or diminutive size of the genital opening, and abnormal position or violence during coition, may lead to recto-vaginal fistula.

I believe that vesico-vaginal fistula due to coitus is almost an anatomical impossibility—even in a short vagina the penis never enters entirely when in the natural position. A distended bladder might be thought to aid in the production of such a fistula, but it presses the uterus backward and upward, thus lengthening the vagina and stretching its anterior arch, and the only possibility is the detachment of the anterior fornix from the uterus. Lesions of the upper part of the vagina do not occur if it is healthy and of normal elasticity and extensibility, despite the relative size of the male and female organs and the violence of intercourse, except occasionally when in an unnatural position. In one of my two cases the pathological condition was furnished by atrophy associated with the climacteric, in the other by chronic atrophic parametritis.

Intercourse by the urethra occurs only in cases of atresia hymenalis, when it is *locus*

minoris resistentiæ. Usually in this case the urethra is slowly dilated by persistent efforts, but rapid dilatation may result in its rupture. —Y. Lvow, in *American Journal of Obstetrics*.

ABSINTHISM AND ITS DANGERS.—Driving in any part of Paris in the morning about half-past eleven o'clock, or in the evening at six, one sees hundreds of French men and women seated at the little tables in front of the *cafés* drinking, and three out of every four are sipping absinthe. This distillation of an herb that grows in some parts of France and Switzerland contains, besides alcohol of 85 per cent., an essential oil which possesses for *absintheurs* a fascination. The liquor when poured out resembles in color Scotch whiskey, but when a perforated silver spade is put across the top of the glass with a lump of sugar on it, and water allowed to drip slowly through, it assumes an opalescent green color with a taste of anise seed. It is now ready for consumption, which requires from one-half to three-quarters of an hour. The *absintheur* then goes home with an excellent appetite and lies down at night to voluptuous dreams Next morning he awakes quite well, and the absinthe of the day before acts as a mild aperient. But soon the scene changes, and in a few years or a few months, as the case may be, and as the number of glasses a day has been smaller or larger, we see him a prey to tremblings, epilepsy, dementia, neurasthenia or convulsions, cerebral or spinal congestion, paralysis, etc. For this, one, two, three, or at most four absinthes a day are enough. One of the first actions on the nerve centres is to annul all sexual desire, and it is from this cause—absinthe—that the population of France is decreasing, while suicide, crime, insanity and diseases of the nervous system are increasing. Professor Laborde injected recently, before his class, twenty drops of the essence of absinthe into a guinea-pig, which died after a series of epileptiform convulsions; during the interval the animal stiffened itself on its four legs, curved its back in *arc de cercle*, and then fell down repeatedly, agitating its forepaws wildly and crying piteously until death ended its sufferings in forty-five minutes after the injection. —*Dominion Medical Monthly*.

GALL-STONES FROM TIGHT LACING.—The relation of tight lacing to the development of gall-stones is rendered very clear by noticing the situation of the gall-ducts in the liver deformed by tight lacing; the furrow thus caused runs directly across the right lobe of the liver, as the result of which there is a tendency to atrophy of the gall-bladder. When tight lacing has been practiced to an extreme degree, an artificial fissure is formed in the liver, giving rise to what is termed the "lacing lobe," which carries with it the gall-bladder. The constricted portion of the liver is found to be just at the point of junction of the gall-bladder with its duct. In these cases it is common to find the gall-bladder greatly distended, extending far beyond the border of the liver, and frequently an examination made post-mortem reveals the presence of gall-stones. Stagnation of the bile is well known to be one of the most important causes of the formation of gall-stones. A change in the composition of the bile, from catarrh resulting from congestion of the mucous membrane, and the thickening of the bile due to failure of the gall-bladder to completely evacuate itself, gives rise to the formation of small masses which serve as nuclei for calculi; hence anything which obstructs the free outflow of bile through the cystic duct must favor formation of gall-stones. I am also of the opinion that many cases of cancer of the liver should be attributed to tight lacing. It is only a few years since Langenbuch was obliged to open an abdomen to remove a "lacing lobe" of the liver, which had been so completely separated from the rest of the organ as to cause its death, rendering its removal necessary. In view of such facts as these, it is the duty of every physician to take special pains to warn his patients against the evil effects of this pernicious practice. Few women are conscious of the fact that they are injuring themselves by tight lacing.—MARCHAND, in *Deutsche Medicinische Wochenschrift*.

A NEW ANÆSTHETIC, A SUBSTITUTE FOR CURARE.—Professor Rosendahl, of Upsala, describes a new anæsthetic and paralyzant, which he imagines can supersede curare in the physiological laboratory, and likewise prove of some value therapeutically. He terms this drug *Septentrionaline*, inasmuch as it is obtained from the aconite of the north, *Aconitum lycoctonum*, which also provides two other alkaloids, both strong convulsive poisons and antagonistic to the former. Septentrionaline is a white or slightly yellowish powder, of bitter taste, producing after a short time an anæsthetic effect upon the tongue, soluble in alcohol and ether, and in water slightly. Taken by the mouth it induces no general poisonous effects, but subcutaneously administered it increases saliva-

tion and sometimes induces nausea. It paralyzes first the sensory nerve-endings, and later there is sometimes a short motor irritability, followed by paralysis of the muscles; the result is that the animal is made first anæsthetic, then is quite paralyzed and motionless. If the dose is very large, the muscles of respiration also become affected and breathing ceases, though the heart still continues—the heart is thus always the *ultimum moriens*. If artificial respiration is employed, the animal can be kept alive indefinitely, and recovers as soon as the poison is eliminated. In spite of its poisoning, the heart muscle does not appear notably affected. The influence on the pupil is slight or altogether *nil*. In vivisections it is preferable to curare, because the dosage is fixed, and it produces anæsthesia. So far as its possible use in practical medicine is concerned, strychnine-tetanus, both in frogs and warm-blooded animals, yields immediately to injections. The dose required to produce paralysis or curarization is, per kilogramme of body-weight, for dogs .007 gramme, for cats .01 gramme. The dose for human beings must be calculated on this basis.—*Medical Record*.

Filaria Loa beneath the Conjunctiva.—Eight months before coming under observation, this woman, 32 years old, felt *Filaria loa* in one eye. The worm caused a sensation of pricking or quivering, and its movements were clearly recognizable; it wandered over the eye beneath the conjunctiva, which it raised into a small ridge as it moved; it sometimes left one eye, and could be felt to cross the bridge of the nose beneath the skin and find its way into the other eye; of late it had confined itself to the left eye. Sometimes the eye was tender and a little suffused after the appearance of the parasite. In the warm climate of Africa the worm made its appearance frequently, but on the woman's return to England it was only visible in warm weather, disappearing into the deeper parts on exposure to cold. When the parasite was visible the eye appeared normal, except for a small vesicle at the outer part of the conjunctival *cul-de-sac*, and tortuous movements could, under favorable conditions, be seen beneath the conjunctiva. The worm was kept in place with a finger, while the eye was cocainized. Then an incision was made in the conjunctiva and the parasite withdrawn. It looked much like a piece of fishing-gut, and was active for a short time, but soon succumbed when placed in a weak solution of boric acid. It was twenty-five millimeters long and five-tenths of a millimeter thick; the head tapered slightly, and the tail to a greater degree. Around the worm was wrapped a fine filament that appeared to be its alimentary canal. From the size of the animal it appeared to be a male. It is not known how it gained entrance; no filaria were found in the blood.—Argyll Robertson, before the Ophthalmological Society of Great Britain.

A Curious Anomaly.—At the Congress of Gynæcology, Obstetrics, and Pædiatrics, at Bordeaux, Lannelongue reported the case of a male infant, aged three months, which passed water through an umbilical appendix resembling a penis, and also by the natural organ which was in its proper place,—the jet which came from the umbilical canal described a curve more than thirty centimeters in diameter. On examination it was found that the apparent abnormal penis was an umbilical hernia caused by the persistence of the urachus. A urinary fistula had been produced on the separation of the umbilical cord. The child died of broncho-pneumonia; and at the post-mortem, the bladder having been injected, it was seen that that viscus was prolonged by a channel as large as the fore-finger—namely, the urachus—up to the umbilicus. This channel extended into the external appendix, where it opened by an oblique orifice resembling the meatus urinarius. The contractions of the bladder in micturition caused a stream in both directions, umbilical and urethral, hence the double jet of urine seen from time to time; this, however, was exceptional, as the musculo-elastic ring of the umbilicus fulfilled the function of a sphincter and prevented the escape of urine through that orifice. This experience once more shows the necessity of tying the umbilical cord only after having satisfied one's self that there is no hernia at the proximal end.—*La Semaine Médicale*.

Waterlogging in Anæsthesia.—Doctor Joseph Price says that in his own work at present shock is simply unknown. What is sometimes called shock is simply "waterlogging with an anæsthetic." Commenting on this, the *Denver Medical Times* remarks that: "Men and women graduate from the best medical schools in the country and practice surgery, and yet never know how to give an anæsthetic. A great deal of fuss is made about histology, microscopy, etc., and yet a student may attend three years in any one of

the best medical colleges in the United States and never receive one hour's practical experience in the giving of ether or chloroform. Even the internes in the hospitals are not instructed; they are simply allowed to suffocate, overpower, and fight their way as best they can. The fact is, the operator hardly dares offer a suggestion, the anæsthetizer is so extremely sensitive. As long as this condition of affairs continues, there will be 'waterlogged patients dying from so-called shock.' "

And we add: There will be an immeasurable amount of suffering endured by the most innocent and interesting of our fellow-beings, merely because the great majority of their medical attendants have never learned practically how to employ anæsthetics in labor; and because this class of patients and this alone think it their duty to be martyrized !—*New York Medical Times.*

Curious Gastric Concretion.—A man, aged 44, who took alcohol too freely, complained of anorexia, headache, etc.; had a coated tongue and slight tremor. His symptoms were attributed to alcoholism, and after a month's treatment he was much improved. Some months later, however, he died of pulmonary tuberculosis, and the necropsy revealed a deep chronic ulcer of the stomach situated close to the pylorus, causing adhesion to the liver. With the ulcer was found a calculus of flattened cylindrical form, measuring ten centimeters in length, five centimeters in width, and four centimeters in thickness, weighing 75 grammes. It was very dark green, of resinous appearance, and showed a aminated structure. Chemical examination confirmed the view that the concretion was of a resinous material, resembling shellac. The patient was a joiner, and it was supposed he habitually drank some of the alcoholic solution of shellac used in his trade, and that the shellac had precipitated in the stomach. His employer declared the man had habitually drunk shellac polish, and that he had repeatedly warned him on that account.

Carl Friedlaender reported a case in which there were many shellac stones in the stomach and intestines, that gave rise to fatal ileus; another, detailed by Langenbuch, had two concretions (one in the stomach, one in the intestines).—*Berliner Klinische Wochenschrift.*

Ocular Fatigue.— Fatigue of the eye from reading is caused by excitation of the following apparatus: The internal muscular, from accommodation; the external muscular, from convergence; the retina, from the luminous rays; and the conjunctiva, from caloric rays. Exaggerated excitation of these induces asthenopia, which may be divided into muscular, accommodative, and retinal or conjunctival. Fick has shown that winking is more frequent as the retina becomes more fatigued, and I find that in reading at a distance of thirty centimeters the number of winks per minute is 1.8 with electrical illumination, 2.8 with gas light, while with weak illumination which only permits reading at eighteen centimeters the number is 6.8 per minute. Consequently, the frequency of winking is an objective indication of ocular fatigue.—R. Katz, in *Annales d'Oculistique.*

Biliary Cirrhosis in Children.—Seven cases presented all the symptoms observed in the adult; but, in addition, in many instances there was hypertrophy of the spleen. So marked is the splenic enlargement where there is not great enlargement of the liver that the true nature of the disease may be easily mistaken. We believe this associated enlargement of the spleen is peculiar to cases of biliary cirrhosis commencing in childhood; a further peculiarity is the frequency with which clubbing of the fingers may be observed; in some instances there was enlargement of the ends of the femur and tibia. The backward and stunted appearance of affected children indicates the influence of the disease on the general nutrition.—Gilbert and Fournier, in *Revue des Maladies de l'Enfants.*

Death from Urethral Injection of Cocaine.—Sudden death followed an injection of about six drachms of a five per-cent. solution of cocaine into the urethra. The urethral mucous membrane appeared to be quite intact, and the result was attributed to pronounced arterio-sclerosis and the undue quantity of the drug employed.—*Centralblatt für Chirurgie.*

Locomotor Ataxia.—A new sign in locomotor ataxia is lack of pain when violent compression of the ulnar nerve is made, although the usual tingling of the finger is felt. This condition is present in seventy-five per cent. of my cases, and occurs in no other form of organic disease that may be mistaken for tabes.—Biernacki.

The Medical Age.

VOL. XIII. DETROIT, NOVEMBER 11th, 1895. NO. 21.

Original Articles.

ELECTRO-THERAPEUTICS IN GENERAL PRACTICE.*

BY A. LAPTHORN SMITH, B.A., M.D., M.R.C.S. (ENGLAND).

Notwithstanding the immense strides which the application of electricity to the arts and sciences in general has made during the last ten years, it must be admitted that its employment in the general practice of medicine and surgery has not become so widespread as one would have been led to expect. That this mysterious element possesses marvellous powers as a therapeutic agent, when properly applied, must be evident to every one who has attended any of the meetings of this Association; while hardly a number of any medical journal can be picked up which does not contain one or several articles recommending the application of electricity for some particular disease. There are many specialists, both inside and outside the limits of this Association, who employ electricity almost exclusively, and it cannot be denied that their results will compare favorably with, and even surpass, in many cases, those obtained by the use of drugs or the application of the knife.

If electricity has failed at all to make that headway in medicine which is so much to be desired, it is principally because the general practitioner has failed to take it up. The reason for this is probably to be found in the difficulties to be contended with in obtaining a suitable apparatus, and in keeping it in order when once obtained. The busiest man in the whole profession is without doubt the general practitioner, who is often a first-rate all-round man, attaining to an excellence in several departments of his work which is hardly excelled by the specialist who does nothing else; but he is certainly, as a rule, greatly pressed for time, and looks askance upon any method of treatment or procedure which is likely to make any serious demand upon the already limited time at his disposal. Also, being obliged to provide himself with costly instruments in half a dozen departments of his art, the high prices generally charged for electrical apparatus have seriously militated against this method being at all generally adopted. If the apparatus were placed upon the market at a price somewhat approximating its cost, and if the methods of applying it could be so simplified as to be easily learned, there is no doubt that the number of practitioners who would use it daily would number thousands, instead of hundreds.

I shall now endeavor, briefly, to show how the cost of an outfit and the trouble of keeping it in order may be reduced to a minimum. The outfit which is really essential is a moderate-sized battery, a galvanometer, a current-controller, and electrodes. With these alone a vast variety of cases can be treated, such as chronic inflammation of the joints, fibroid tumors, endometritis, and chronically inflamed ovaries. In addition to this, a faradic apparatus is required. What we want, in order to extend the use of the faradic current in medicine, is that some manufacturer should make by the thousand, and at a very moderate cost, an apparatus quite as good as the original one which has cost the specialist so much money and time to perfect; and it seems to me an important part of the duties of this Society to decide, through its committee on faradic apparatus, upon a standard apparatus which could be recommended to the general practitioners throughout the country. The faradic coil,

*Presidential Address delivered before the Toronto meeting of the American Electro-therapeutic Association.

stripped of all unnecessary accessories, should consist of a primary coil of 300 turns of coarse wire; while the secondary coil should contain about 1000 turns of fine wire. It has occurred to me more than once that if these coils were arranged in the form of a walking-cane, the interrupting apparatus being placed in a little chamber in the handle, the doctor would be saved a great deal of trouble in carrying about the bulky and short apparatus with which we are all familiar, and which, owing to its thickness, uses a good deal more wire for a given number of turns than a much longer and thinner apparatus would require. Such a walking-stick should be manufactured by the hundred, for something like $5.00 apiece.

In nearly every town and village there is a telegraph office, and the operator is an electrician in a small way; at least, as a rule, he or she knows enough about electricity to set up a battery and take care of the cells. The operator has generally some spare time, and in return for a moderate remuneration would be willing to take charge of the doctor's battery. A good many physicians, inclined to make frequent use of electricity in their practice, have told me they became discouraged because the apparatus would not work just when they wanted it; and I experienced the same difficulty myself until I purchased a small instrument which looks like a watch, and which when applied to the two poles of any cell will indicate at once whether that particular cell is working well or not. If at any time, therefore, my battery gives out, I have only to rapidly run over the fifty or sixty cells until I come to the dead one, which is made evident from the needle not moving when applied to it. In a moment this offending cell is taken out of the circuit and laid aside. When a half-dozen of them have thus been retired from use we can send for our friend, the telegraph operator, or some other young man who is fond of electricity, who can spare an hour in putting them in order.

We should have a few spare cells also, to leave at any house where we have a patient undergoing a course of faradic treatment. Those, of course, who are being treated by the galvanic current must, as a rule, be carried to our office, but they generally improve so much after a few applications that this becomes a much less difficult undertaking than would at first appear necessary.

The cost of an electrical outfit, gotten up with the view of moderate cost, is a good investment for any general practitioner, for he will in the course of a few months be able to apply it in a sufficient variety of cases to soon pay for the total outlay, besides greatly increasing his reputation by the good quality of work he is thus enabled to perform. A person who is suffocating with the pressure of an exophthalmic goitre will have, and justly so, a very high opinion of the physician who, in two or three applications of the continuous current, relieves the difficulty in breathing, and who by a dozen applications produces a feeling of general well-being which remains for a year or longer. I have had many such cases. And the patient who is suffering from menorrhagia will appreciate the hæmostatic effect of the positive pole of the galvanic current in the uterus.

But I had better, perhaps, take up the various applications of electro-therapeutics in general practice, in their proper order. I shall begin with the galvanic current. In my opinion, by far the most important use of it is in fibroid tumors: any general practitioner who is competent to do aseptic midwifery is quite competent to treat the average fibroid tumor by means of the galvanic current. I shall not take up your time by giving directions how this is to be employed; Apostoli's little book, as well as many others, contains directions so explicit that a child could almost understand. The secret of success I have found to be the most rigorous cleanliness of the hands and instruments whenever they are used in the vagina or uterus, and, secondly, on no account to use force with a solid instrument. If you cannot get the sound into the uterus, see if a bougie will go, and then so curve the electrode that it will follow the same road. This method is only dangerous in the hands of those who employ force to introduce the sound.* It will cure most cases of subinvolution and endometritis, diminishing the periodical hæm-

* I have also found that drawing down the cervix with a bullet forceps or vulsellum will generally straighten the canal so that the sound will enter. The expensive platinum sound may be dispensed with by using cast-zinc or copper sounds.

orrhage and completely arresting the leucorrhœa. Tender and bound-down ovaries are greatly relieved by means of an oval-ball electrode, gently pressed against them at the vaginal roof. Dysmenorrhœa I have cured over and over again, simply by connecting the negative wire to a uterine sound, gently pressed against the os uteri, for after a few minutes it will be found to easily slip in. Half a dozen applications a month, for two months, has cured a number of my cases, some of whom have since borne children, although they had been sterile before. I believe that in several patients I have reduced abdominal distention from ascites by passing the galvanic current through the abdomen, but of this I am not so sure. I have also in many cases, by means of the negative galvanic current, brought on the menstrual flow in stout women with an infantile uterus, whose life was a burden to them owing to their obesity, and who obtained new pleasure in life by losing their surplus fat.

Next to these uses of the continuous current in gynæcology, I think its greatest value is to be found in the treatment of goitre. I am perfectly certain that it does produce a marked effect upon the vaso-motor nerves of the head and neck, for I have many times made the patient become pale, and in some cases even faint, simply by turning on the galvanic current of fifteen or twenty milliampères, and this without causing the slightest pain whatever. I presume the diminution in bulk of the spongy vascular thyroid gland is due to the same cause as the pallor and faintness, namely, the toning up of its dilated blood-vessels.

In persistent congestive headaches the galvanic current is very effective, but applying it to the head will not cure headaches due to blood-poisoning from constipation.

The value of the continuous current in chronic diseases of the joints cannot be overestimated. Several times I have seen an infirm person walk erect, after an application of this current (by means of two large moist clay electrodes) to each side of the joint for from five to ten minutes.

In all these cases I believe the mistake has been made in the past of not using a strong enough current, owing to the want of moist clay electrodes of sufficient size. With the ordinary little sponge electrodes, usually supplied, not more than two or three milliampères can be used without burning.

Another use for the galvanic current from which I derived great satisfaction when I was in general practice was in the treatment of cases of orchitis, after the acute stage was over, when the patient was able to walk, but while the testicle was still very large and tender. A few applications of the galvanic current to the testicle has a wonderful effect in diminishing both the size and the sensitiveness of that organ.

In stricture of the urethra I have also found the method of Doctor Newman very satisfactory, except in two cases—one a gentleman who had been cut for stricture many times, and had also enlarged prostate and inflamed bladder, in whom I was able to keep the canal up to No. 28 for several years with a negative bougie, but eventually it failed; the other a young man who had a long and thick traumatic stricture, from falling on a sharp-edged piece of wood, which damaged the urethra very greatly.

With a good faradic apparatus any intelligent practitioner can accomplish a great deal for his patients, both male and female. If the apparatus has a long fine coil and a short thick one, he can treat a great range of diseases, using the fine-wire current of tension for nervous diseases (especially when they are evidenced by pain) and for muscular diseases (especially when accompanied with wasting). Thus he can relieve the majority of cases of ovarian and uterine neuralgia, as well as vaginismus, by applying the fine-wire current, with the bi-polar electrode, in the uterus, or merely in the vagina. On this point I can speak from a somewhat large personal experience; but although I am a specialist, and consequently have a great many such cases to treat, I have been outdone by one of my friends who is a general practitioner, and whom I induced to purchase a Gaiffe's faradic apparatus. One day, happening to go into his office, I noticed that his battery bore signs of having been very frequently used, and I asked him how it came to be so worn; he replied that he had cured more of his suffering women by this means than by all other means put together. I asked him what was the nature of their diseases; to which he

answered that he did not know—all he could say was that they had complained of pain, and he had relieved it, and in most cases cured it, by simply applying the fine-wire faradic current as high up in the vagina as he was able to introduce the electrode. I might add, however, that it will be found most useful in women who present what are called hysterical symptoms, and who complain of a pain in the ovaries which is relieved by pressure. Any case of ovarian pain which is relieved by firm deep pressure over the ovaries, will, I can almost promise, be cured by fine-wire faradism. In those cases in which the pain is increased by pressure, we may relieve, but are not so sure to cure, by this treatment.

The benefits of a fine-wire faradic current are not limited to the female sex, for in testicular pain of nervous origin, such as men suffer from when going through some anxious ordeal, five or ten minutes' application of fine-wire faradism will give almost instant relief.

Also in headaches, and neuralgias about the head, whether supra-orbital, infra-orbital, or in the orbit itself, the fine-wire current passed through the part will nearly always relieve if it does not cure.

One curious case in which the fine-wire current gave great relief was one of hydrosalpinx, in which the woman came to me regularly, for several years, whenever the tube became distended. She refuses to be operated on, as she has been relieved of her suffering every time by the application of the faradic current—followed, strange to say, by a profuse watery discharge. The distended tube, which was easily felt before the application, could not be felt afterwards.

I have also had a somewhat similar experience in prolapsus uteri; in very advanced cases and in very old women it has sometimes failed, but in the majority of cases the result has been remarkable. In one case the uterus, which for years had remained outside the body, thenceforward remained inside, owing, apparently, to the toning-up effect on the muscular tissue of the uterine support, including the vaginal outlet.

I have also had several gratifying results in atony of the female bladder: one lady was in the habit of only passing water every three days, by which time the bladder became distended. By introducing the bi-polar electrode into the bladder while it was still distended with urine, contractions were almost immediately set up, so that at the end of ten days' treatment she went home completely cured, passing water several times a day.

Another instance of its value in contracting hollow muscular organs is in atony of the uterus after labor. I have had no experience of this, for it has always been my routine practice to give a teaspoonful of ergot; but several of my friends who carry a small faradic battery in their obstetric bag have told me that they have promptly arrested post-partum hæmorrhage by this means.

I have tried it a few times in chronic constipation, with good results.

One very satisfactory case of epigastric pain, which seemed to be made worse by morphine, was cured at a single séance with the fine-wire current. This lady had been in great suffering, and I had tried various drugs, without avail, when it suddenly occurred to me to try the faradic current; placing one pole over the painful area in the epigastrium, and the other over the spine, in a few minutes the lady stated that the pain was quite gone. Neither did it occur subsequently; and ever since being relieved of her pain this lady has positively been a trouble to me by bringing her friends, no matter what they were suffering from, to my office, for electricity, which she believes will cure anything. I attributed the relief in this case to the contraction of the dilated stomach, which was thus toned up enough to expel the gas which was stretching its fibres and causing pain.

Several other cases to which I look back with considerable pleasure, were of ladies suffering from a very wearing pain in the back, not due to displacement of the uterus nor to congestion of the kidneys, but simply and the other muscles which hold the spinal to weakness of the erector spinæ muscles column erect. The application of the fine-wire faradic current, passed up and down all over the back, but especially along the spine, gave great relief. This was followed by the coarse-wire current with slow interruptions, by the aid of which these muscles were greatly strengthened. Whatever the *modus*

operandi may have been, one thing is certain, and that is that these patients were cured.

For lumbago, which, as you are aware, is often a very intractable disease, I have used the fine-wire faradic current quite frequently. In a few of the cases the disease has returned from time to time; but in quite a number the effect has been permanent, the patients having remained entirely free from this disease for the last five years.

Although here I cannot speak from experience, there is another instance in which the coarse-wire current is of inestimable value, and that is in cases of paralysis of healthy muscles due to disease of the spinal cord, from which their nerves originate. The muscles are healthy, and so they would remain if they could be exercised; but when, owing to disease or accident, the current of the nerves is either not generated, or if generated is not sent down owing to section of the nerve cord, we are able by means of the faradic current to exercise these muscles and keep them in good order until such time as the brain or spinal cord, or nerves leading from them, shall have recovered their power to originate or conduct.

The galvanic current sometimes becomes of very great value in what might be called æsthetic work. Thus, a beautiful woman, whose beauty is marred by the presence of fifty of sixty long black hairs on her face, grieves constantly at their presence, and would be grateful if we would remove them by electrolysis. I have done this several times. Then nævi may be destroyed by passing through them half a dozen fine needles, which are then threaded on to a fine copper wire, and the negative current turned on to thirty or forty milliampères, of course under an anæsthetic. The result is, the nævus disappears without leaving a scar. Then again, the man with the paralysis of the vaso-motor nerves of the nose, whose olfactory organ blooms a fiery red color, can have this rubicundity removed by the application of the galvanic current, which tones up the dilated vessels.

The galvano-cautery is, for the general practitioner, one of the most useful applications of electricity that I know of. By means of the judicious use of cocaine and the red-hot platinum wire a great many minor operations may be done without general anæsthesia and without the loss of a drop of blood. Large warts may be removed from any part of the body, but especially from about the genital organs. Small and even quite large sebaceous tumors may thus be amputated. In the operating-room the diseased tube and ovaries may be amputated with the galvano-cautery knife, which has the immense advantage of destroying the infecting virus remaining in the stump, and hence operations performed in this way are much less likely to be followed by adhesions. It is also useful for stopping oozing from torn adhesions; and, in fact, if the adhesions met with in abdominal surgery were cut across by the cautery knife, instead of with cold steel knives or scissors, there would be no oozing at all.

If there is anything discouraging in general practice it is advanced cancer of the uterus, the patient having first come under the practitioner's notice in a condition of the disease so advanced as to render it useless to operate with the knife. With the galvano-cautery knife we can hook out piece after piece of the diseased tissue, without the loss of any blood, until nothing is left but the shell of comparatively healthy tissue; while if we could succeed in removing all the diseased tissue, this method has one very great advantage over removal with the knife, in that the heat which converts the dull wire into a cutting instrument, at the same time destroys the bacilli of cancer and prevents a reinfection. From the reports of our distinguished Fellow, Dr. Byrne, of Brooklyn, the results from this method of treating cancer are fully as good as those following the treatment by total extirpation; and while in advanced cases the latter method is simply out of the question, the treatment with the cautery knife removes the sloughing tissue and puts a stop to the hæmorrhage and suppuration which wear the patient out by exhaustion or septic infection. For further information on this point I would refer the reader to Dr. Byrne's excellent article in the International System of Electro-therapeutics.

The application of the galvano-cautery knife in general practice was out of the question as long as a battery was required to produce the current, because the apparatus

was so crude, troublesome and costly that no one would use it if he could avoid doing so. But now that the street current is available in the apparatus invented by myself or others, there is no longer the slightest objection to urge. At a cost of twenty-five dollars we can have a small transformer which screws into any ordinating lamp socket, when, on pressing a button, the wire becomes red-hot, and the degree of heat can be made to vary from white to cherry-red by advancing or retiring the secondary coil. This instrument is also very valuable in removing obstructions from the nasal passages. I know of one general practitioner who made quite a reputation for himself as a rhinologist by curing nasal obstruction by this means. The patients were unable to breathe through the nose, and consequently became mouth-breathers, and suffered from all the ills which mouth-breathing entails. My friend blew in some cocaine spray until the passage was anæsthetized, when, without any difficulty, he burned a wide channel where it was narrow. I have seen some of these patients, and they have spoken in the highest terms of the treatment.

I have not attempted in such a brief paper as this address must necessarily be, to describe the method of using electricity; but I would refer those who wish for the most explicit details, to the International System of Electro-therapeutics, in which, as I have already mentioned, the method of employing electricity in these and many other diseases is clearly laid down. I merely wish to draw attention to the fact that during the last few years the facilities for using it have been very much increased while the cost has been diminished; so that there is no longer any reason why the patients of the general practitioner should not enjoy to a very large extent the advantages which the specialist is able to afford. Of course there are certain branches of treatment, such as the use of the static current, in which the apparatus is too costly for the general practitioner to be warranted in purchasing it. But I think I am safe in saying that he would be quite justified in procuring thirty or forty Léclanché or Law cells with the galvanometer and rheostat for the galvanic current, a faradic apparatus with five or six cells of the same kind to run it, and a transformer for using the street current for galvano-cautery purposes. With such a moderate outfit, even, one may not only be recouped for the outlay, but may relieve a great deal of suffering and effect many a cure—which is, of course, the first and greatest aim of every member of our profession.

Montreal, P. Q.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.*

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S ARMY.

(*Continued from page 616.*)

RECAPITULATION OF THE SANITARY ORGANIZATION OF THE AUSTRO-HUNGARIAN ARMY.†

In time of peace the number of medical officers for each Infantry regiment, of four battalions, is four for the regimental staff and the battalions, and one for the *Ersatz* (reserve) battalion cadre. The regimental medical officers are: Regimental *Arzte*, first and second class, with the rank of captain of the first and second class; and *Oberarzte* (which may be rendered first assistant surgeons), who have the rank of first lieutenant. Some of the regiments have assigned to them a nondescript medical official known as an *Oberwundarzt*, which literally would mean "over surgeon," using *surgeon* in a sense inferior to that of physician or doctor.—The French have a term, "infirmier-major," which describes their functions more accurately. These are not generally doctors of medicine, do not belong to the corps of medical officers, and their relative rank is that of second lieutenant. The assignments of medical officers to regiments in peace, however, are often made in excess of the numbers laid down above, as some infantry regiments have as many as six medical officers. When all the battalions of the regiment are in a single garrison, which is not often the case, a less number of medical officers is required than when some of the battalions are detached. In

*Read before the Association of Military Surgeons.

†From the Military Information Division, Adjutant-General's Office, U. S. A.

time of peace the infantry companies do not carry on their rolls any bearers or *Blessirten-trager*, but in order that there may be *trained men on hand, in case of war*, for the positions of *Blessirten-trager* and *Bandagen-trager*, one private in each company and one corporal in each battalion (twenty men per regiment) are kept under instruction by the senior medical officer.

In case of mobilization, the number of medical officers in each regiment is raised to eight, of whom seven are with the staff and the field battalions, and one with the *Ersatz* battalion. These additional officers are obtained from the reserve officers of grades similar to those held by the active regimental medical officers, and from the one-year volunteer *Assistenz-arzte*, or second assistant-surgeons. These latter officers have the rank of second lieutenant.

Each company on a war footing has three *Blessirten-trager*, and each regiment has five *Blessirten-trager* non-commissioned officers and eight *Bandagen-trager*—"bandage-bearers," *i. e.* dressers, or hospital assistants.

The independent Rifle battalions have each one medical officer, in time of peace or war, who is either a first- or a second-class regimental *Arzt*. In time of war the battalion has one non-commissioned officer bearer, and two hospital assistants. Each company has the same number of bearers as an infantry company.

Every military medical officer carries on his person in the field a small pouch containing a few medicines, some court-plaster, absorbent cotton, etc., and a pocket instrument-case. Every non-commissioned officer and soldier of the combatant arms is supplied, on mobilization, with a small dressing-packet which contains the necessary material for the first dressing of a wound, and which is carried constantly on the person in one of the pockets of the jacket or trousers. Such other sanitary material as is immediately necessary on the march or on the field of battle is packed in knapsacks or pouches, and carried, in cases of emergency, by the body-bearers and bandage-bearers; these knapsacks or pouches are habitually carried on the march in the covered baggage-wagon assigned to the staff of each particular organization (regiment, battalion, or *Abtheilung*). The regimental or battalion train contains no wagon or van especially assigned to the Medical Department. For operations in mountainous countries, each battalion has, in addition to the supplies in the pouches of the bearers, a reserve of sanitary material for the first dressing-stations, which is packed in two panniers and carried by a pack animal. This supply of material is at the disposal of the medical officer of the battalion.

The regular number of medical officers for a Cavalry regiment is three, though, as in an infantry regiment, the number actually on duty may be greater or less than that prescribed by regulations. In time of war the regulation number of medical officers is also three. No enlisted men are carried on the rolls as bearers, either in peace or in war, and no enlisted men of cavalry are trained in sanitary duties in peace. The duties of the sanitary service for the cavalry are, in time of war, discharged by detachments of the sanitary troops.

To each one of the fourteen corps Artillery regiments the regulations assign two medical officers in time of peace, and to each one of the forty-two divisional artillery regiments is assigned one medical officer.—These numbers are not strictly adhered to, however. In time of war two medical officers are allowed to each field artillery regiment, one of whom is generally taken from the reserve, and one additional medical officer is allowed for such regiments as have a horse battery division, the horse batteries being detached for service with the cavalry. No bearers are carried on the rolls in time of peace, but each field battery has in war four (two upper and two under) *Blessirten-trager*. The horse batteries have none, their bearer service being performed by detachments of sanitary troops, as in the case of the cavalry. To the staff of each corps and divisional artillery regiment are also attached in time of war, one corporal *Blessirten-trager* and two *Bandagen-trager* (privates). In time of peace a limited amount of instruction in hygiene and first aid is given to the enlisted men of artillery, much the same as that given to the enlisted men of infantry, but nothing is fixed as to the number of men that are to be kept under instruction in these branches. Sanitary mate-

rial is supplied the same as with infantry units and carried in a similar way.

Regarding *Assistenz-Arzt-Stellvertreter:* One-year volunteer medical students have to serve a half-year of their time in the *Soldatenstand*,* and must serve as substitute *Assistenz-arzt* for a second half-year after gaining the degree of Doctor of Medicine. The half-year's service as *Assistenz-arzt-stellvertreter*, or substitute-assistant-surgeon, commences on the 1st of April or 1st of October immediately following the gaining of the doctor's degree, and this time, as already indicated, may also be included to make up the year's service in the *Soldatenstand*. This officer is, in rank, assimilated to the Cadet-Officer-Stellvertreter, a grade in the Austrian Army which corresponds very closely to that of *Porte-Epee-Fahnrich* in the German Army. Immediately after the granting of the degree of Doctor of Medicine, an authenticated list of the doctor's diplomas is sent to the War Ministry, and on the basis of this exhibit appointments are made to the grade of *Assistenz-arzt-stellvertreter*, and the successful candidates are assigned to the various sanitary institutions and establishments.

The *Assistenz-arzt-stellvertreter*, during his time of service, is instructed both theoretically and practically. After the completion of his service he undergoes an examination on a prescribed list of subjects, and may then —if he is an applicant for a commission in the medical corps of the Army, and has satisfied all the requirements for admission thereto —be commissioned as *Oberarzt* or first assistant-surgeon. One-year volunteer medical students, who have served their half-year in the *Soldatenstand*, and are in receipt of the stipend for aspirants to the medical corps, must remain, immediately after receiving the degree of Doctor of Medicine, and before they can be appointed to the grade of *Oberarzt*, on probation for a while in order to acquire their special military surgical instruction. In case of mobilization, those substitute assistant-surgeons who are in active service and who are qualified for promotion are appointed to the grade of *Assistenz-arzt* (second assistant-surgeon). Appointments to this grade are also made from other sources.

* *Soldatenstand* means, taken literally, "Soldier *personnel*," distinct from the classes of military officials. The *Soldatenstand* includes only combatant officers, non-commissioned officers, and privates, as well as the *personnel* of the sanitary service; and, in the Navy, the engineers, machinists, and engine-room forces generally. All the remaining persons on the military establishment belong to the class of "officials," or *Beamte*.

VII. THE BRITISH ARMY MEDICAL STAFF AND THE MEDICAL STAFF CORPS.*

Up to the sixteenth century the value of military surgeons was gradually being acknowledged in England, but the temper of the times in regard to their encouragement may be estimated from what we read in Gore: "The poor soldiers, when severely wounded, were discharged with a small gratuity, to find their way home as best they might." This practice prevailed as based on the principle that "it cost more to cure a soldier than to buy a recruit."

At the time of the formation of a standing army, and toward the end of the Stuart period, the ranks of the medical officers were: Regimental Mate, Hospital Mate, Regimental Surgeon, Apothecary to general hospital, Surgeon to hospital, Surgeon-General. A distinction of some importance between physician and surgeon was also made at this time, and existed till the middle of the eighteenth century—so much so that not unfrequently, during Marlborough's campaign in Germany, we read of the commander-in-chief promoting a surgeon to be a physician; and as late as 1764, Brocklesby wrote how necessary it was that the military surgeons should be educated as physicians. The two services, naval and military, were not so distinct during this period as they are now. Sir Thomas Longmore, in his "Life of Wiseman," writes: "Officers of all branches of the military service, and of all ranks, occasionally held commissions for sea service at one time, and at another time for service on land." During the campaigns of Marlborough it was generally considered effeminate to be ill, but eventually the terrible battles of that time, and the fever-stricken countries in which operations were carried on, gave the fighting man the benefits to which he was entitled.

At that period the clever administration, in-

* From the Army Book of the British Empire, 1893.

domitable courage and perseverance of the senior medical officer, Sir John Pringle, kept the medical service prominent, and, under the greatest difficulties, proved absolutely the necessity for the presence of a proper proportion of the relieving element to the fighting strength. Medical officers then, and until 1796, not unfrequently held double commissions and could act in the double capacity of captain and surgeon. Sir John Pringle, the surgeon-general serving with the troops under Marlborough, initiated the system of regimental, field and general hospitals; and the records show that after the battle of Fontenoy, May 11th, 1745, a general hospital was opened at Ath, which cared for upwards of 600 wounded. In the same war a general hospital was opened at Ghent, which received 1500 sick and wounded.

The first assignment of medical officers and their hospitals to an army in the field, in anticipation of their being used, was in the Peninsular War; Sir J. McGrigor, afterwards director-general, was the principal medical officer, and the idea was that every regiment should take care of its own sick and in this way avoid crowding in the general hospital. This scheme answered its purpose then, as is proved by the fact that during the ten months' interval between the siege of Bruges and the battle of Vittoria 95,348 sick and wounded passed through the hospital, and yet, by the assiduous care of the medical officers, there were only 5000 sick on the eve of the battle, the ranks being recruited by convalescents who had been properly treated and returned to duty. This war produced many improvements, which were, however, chiefly confined to the interior economy and administration of general and regimental hospitals; while the organization, *personnel*, and general character of medical establishments scarcely underwent any change. Indeed, there was at this period no ambulance corps in the British service corresponding to the medical staff corps of the present times. A corps called the "Royal Waggon Train" was organized in 1812 for general transport and commissariat purposes—wagons with springs were especially designated as part of its equipment for the carrying of sick and wounded men,—but afterwards proved defective, and was finally broken up in 1833.

On the outbreak of the Crimean War, the "Hospital Conveyance Corps" was originated, recruited for the most part from military pensioners and other non-effectives. Its duties were the transportation of wounded from the battle-field to places of safety, and to supply general and other hospitals with attendants so as to prevent drawing on the effective ranks; also to take charge of the transport, and to furnish servants for the officers of the general medical staff. This establishment failed, owing, amongst other reasons, to the total want of training of the men composing the corps—they were not accustomed to such varied service, nor to work together; further, they were advanced in years and generally drunken and disorderly in habits. Indeed, before the actual hostilities had commenced, fresh men were enrolled and a new system organized. The medical staff officers oversaw in a general manner the work of the hospital conveyance corps, but there was no system of command, and neither discipline nor authority could be directly enforced by them.

In the beginning of 1857, after a short interregnum, when the Land Transport Corps carried out the duties connected with the executive of military hospitals, there was practically no ambulance system. There were physicians and surgeons attached to corps, and there was a general medical staff service, but no cohesion or working form of organization; not the least important of the reasons for this inefficiency was the absence of medical supplies and appliances. It must be observed that the transport of the sick, which the Land Transport Corps had undertaken, is only one of the functions of a medical corps; the other and most important duties, those pertaining to conveyance of the wounded from the field of battle, and attending the sick and wounded in hospitals, still remained to be provided for; and as military medical officers had no connection with the Land Transport or any other corps, this provision was rendered more difficult. The regimental Orderly system, which has been in existence since the days of the Peninsular War, worked fairly well under regimental medical officers, but was open to disadvantages which rendered it necessary that the

sick-attendants generally should be supplied from other services.

By royal warrant, June 11th, 1855, the first "Medical Staff Corps" was organized, consisting of nine companies, each seventy-eight strong, and arranged "to be employed in any way that may be required in the performance of hospital duties." There was scarcely any military feature in its organization, which fact materially facilitated its downfall three months later, notwithstanding the provisions of a second warrant, when (December 20th, 1855) the "Army Hospital Corps" was substituted therefor.

The failure of the "Medical Staff Corps" was mainly due to the doubtful and anomalous position in respect to its relations with the combatant authorities; the men of the corps for the most part acted in hospitals under medical officers who were not invested with military authority and who had no power of awarding punishment for offenses; a considerable proportion of them were undrilled and untrained in the strict requirements of discipline—this was the case not only as to the men, but with the stewards and ward-masters as well. The latter, though having the relative rank of non-commissioned officers, had none of the corresponding powers of command, and were not permitted to wear on their uniforms the insignia of their rank. The corps was filled for the most part by the transfer of men of good character from regiments after a certain term of service, usually two years; and each man so transferred was required to pass a probationary period of three months in a military hospital before he was permanently appointed to the corps.

In 1858 a royal commission under the presidency of the Right Honorable Sidney Herbert was ordered for the purpose of inquiring into the regulations affecting the sanitary condition of the Army, the organization of military hospitals, and the treatment of the sick and wounded. The report of this commission was of the greatest importance to the medical service, leading to improvements not alone in efficiency but in the status and position of its officers. Through it, two fundamental changes were introduced—the remodeling of the department, and the organization of a practical Army Medical School. From this period a great tendency to improve the condition of military medical officers became manifest.

The regimental system (or that in which medical officers were an integral part of the regiment), which had existed for so long a period, and was still in force, though it had been of great service in the past, was found to be incompatible with the development of the Army medical service; and in consequence, in March, 1873, a royal warrant, devised by Mr. Cardwell, then Secretary of State for War, abolished the regimental system and placed all medical officers in one staff or department. Even up to 1889, those of the army medical staff doing duty with the Household Troops were purely regimental officers, but subsequent to this date no officers have been gazetted to the junior ranks, these being filled by the medical staff officers attached for duty; surgeon-majors of regiments are, however, still regimental officers, and as vacancies occur officers of the general list will be gazetted to fill them.

A second warrant, of same date, organized the Army Hospital Corps for extended duties in connection with hospital service. Two new ranks were created, entitled "Captain of Orderlies" and "Lieutenant of Orderlies," while the rank of Apothecary to the forces, dating from 1854, was abolished. In the same year regimental hospitals ceased to exist, and it was directed that military hospitals should be organized and administered either as general hospitals, station hospitals, or field hospitals.

In 1877, authority was given to medical officers to command the officers, non-commissioned officers and men of the army hospital corps, and also all patients in military hospitals, as well as soldiers attached to them for duty. In 1881 the captains and lieutenants of orderlies were gazetted as Quartermasters, Army Hospital Corps, and placed on the same footing as regards pay and retiring allowances as quartermasters of infantry.

In 1883 a committee, under the presidency of Lord Morley, was appointed by the Secretary of State for War, to inquire into the organization of the army hospital corps, hospital management, and nursing in the field. Several valuable recommendations were made,

among which were: Undivided control of hospitals to be vested in medical officers; the medical service of the Household Troops to be assimilated with that of the Army; opportunity to be afforded for practice, in peace, in the use of war equipment, both as regards bearer companies and field hospitals; and the assimilation of the army hospital corps with the army medical department, both of which were to wear the same uniform.

In 1884, officers of the army medical department and the quartermasters of the army hospital corps were designated "The Medical Staff," and the warrant officers, non-commissioned officers and men of the army hospital corps were designated "The Medical Staff Corps." This organization still obtains.

On the Army Service Corps now devolves the duty of supplying transport for the medical department; the transport officer of this corps takes orders from the medical officer commanding the bearer company or field hospital to which the transport is attached.

In 1889 a committee, under the Earl of Camperdown, was appointed to inquire into the pay, status and conditions of service of the medical officers of the Army and Navy; and in 1891 a royal warrant was promulgated altering, in some respects, the designation of the department ranks of the medical staff, and providing for the grant of sick-leave to officers of said staff on the same conditions as those which are applicable to regimental officers. This warrant laid down substantive titles for officers of the medical staff as follows: Surgeon-Major-General, Surgeon-Colonel, Brigade-Surgeon-Lieutenant-Colonel, Surgeon-Lieutenant-Colonel, Surgeon-Major, Surgeon-Captain, Surgeon-Lieutenant—these to carry precedence and other advantages attaching to the rank indicated by the military portion of title, but with limited command. The army rank thus conferred on medical officers facilitates the performance of the duties of command and discipline now imposed. Where the military command of soldiers is involved, the possession of a military title is convenient for common parlance, and enhances the officer's authority.

The organization of the Army Medical Staff comprises a director-general, and a fixed establishment of administrative officers, made up of ten surgeon-major-generals, twenty-four surgeon-colonels, and fifty brigade-surgeon-lieutenant-colonels, who, though executive officers, are available for administrative duties. There is no fixed establishment for each of the remaining ranks of executive officers, but the total number averages 763; there are also thirty-five quartermasters. The Medical Staff Corps consists of thirty-six warrant officers, 336 staff sergeants and sergeants, and 2030 rank and file. The Director-General, under the commander-in-chief, is the responsible head of the department, and charged with the administration and command of the army medical staff and medical staff corps; also of the militia medical staff and corps, the militia reserve of the medical staff corps, and the medical establishment of the Army including the army medical reserve of officers, besides the volunteer staff and corps, and the nursing service. The surgeon-major-generals and surgeon-colonels act as principal medical officers in charge of the medical administration of districts and commands; in certain smaller districts, brigade-surgeon-lieutenant-colonels perform these duties as senior medical officers. The remaining body of officers perform the executive duties at all stations at home and abroad. The warrant and non-commissioned officers and men of the medical staff corps are under the command of the officers of the army medical staff.

The full conditions of service in the Army Medical Staff are laid down in the royal warrant for pay and promotion, and, briefly stated, are as follows: An officer, after three years' full-pay service as surgeon-lieutenant, if favorably reported on, is promoted to the rank of surgeon-captain, and after twelve years' full-pay service, including at least three years abroad, and having passed a satisfactory examination, is again promoted, acquiring the rank of surgeon-major; in turn, a surgeon-major is promoted, if recommended, to surgeon-lieutenant-colonel, after twelve years' full-pay service. All promotions to the fixed establishments of the higher ranks are governed by seniority, tempered by selection with due regard to ability and merit. The regulations as to the full pay, half-pay and retired pay of the different ranks are laid down in the royal warrant for pay, etc.

A recruit, desiring to enlist in the Medical Staff Corps, must produce a certificate of good character from his previous employer and be able to read and write; must be from eighteen to twenty-eight years of age, five feet three inches to five feet five inches in height, of minimum chest measurement and weight of thirty-three inches and 115 pounds respectively. Enlistment is for seven years army and five years reserve service, or three years army and nine years reserve service, at the option of the recruit; which periods of service will be respectively converted into eight years army and four years reserve service, or four years army and eight years reserve service, if the period of army service expires while the man is serving abroad. The regulations as to the regimental pay, the additional corps pay which the men ordinarily receive, and the extra-duty pay given them under special circumstances, are laid down in the royal warrant for pay, etc. The transport of all hospital establishments is carried out by the Army Service Corps.

The arms of the Medical Staff Corps are a short sword bayonet. The equipment is as for infantry, but with the valise pattern of 1882. All recruits go through a special course of musketry. On field service, the Medical Staff Corps is supplied with arms and ammunition in the usual manner. It should be added here, that if England were fighting a nation under the terms of the Geneva Convention, the Medical Staff Corps would be strictly neutral, and would not be in possession of arms or ammunition.

The inspection of the Medical Staff Corps is carried out half-yearly by the principal medical officer of the district, who also receives reports of the officers of the army medical staff serving under him, and satisfies himself that they are efficient in all the details of their duty; he also inspects the hospital, examines into its interior economy, and renders confidential reports on the officers serving in his district, annually, through the general officer commanding, after inquiring into their military and professional efficiency.

It is generally held, so far as medical arrangements are concerned, that on mobilization there should be preparation made for reception of 20,000 wounded in London; also that medical officers and men for the various units, field hospitals, and bearer companies, for three mobile army corps, should be detailed and ready for immediate mobilization. This has been done, and tables have been issued showing in detail how the arrangements are to be carried out. In addition, each general officer commanding a district is directed to prepare a scheme of defense for such district, with the forces and equipment, civil and military, at his disposal. All arrangements are made with a lighter scale of equipment than for foreign service, it being assumed that the campaign will be very brief; no tents or heavy field equipment are arranged for. A pamphlet will shortly be issued with army orders giving "Instructions for the Organization and Distribution of the Army Medical Staff, Medical Staff Corps, and Militia and Volunteer Medical Staff Corps, on Mobilization for Home Defense."

As auxiliaries and reserves, there is a body of 1200 non-commissioned officers and men of the militia reserve, who are annually trained in the duties of the Medical Staff Corps, and by royal warrant, dated June 6th, 1891, the formation of a Militia Medical Staff Corps has been approved. This corps, when raised,* will comprise the ranks of surgeon-major, surgeon-captain, surgeon-lieutenant, sergeant, corporal, and private, who are to receive the pay and allowance laid down in Regulations for Militia, 1893. Another large and important auxiliary to the Medical Staff Corps is furnished by the Volunteer Service. Ever since the commencement of the volunteer movement, medical officers have been attached to each volunteer corps or battalion; but by Army Circular, Clause 59, of 1886, a royal warrant was published, which provided that with a view to the further development of the medical organization of the volunteer force, a corps, to be designated the Volunteer Medical Staff Corps, should be formed, comprising the following ranks: Surgeon-lieutenant-colonel, surgeon-major, surgeon-captain, and surgeon-lieutenant, quartermaster, first- and second-class staff sergeants, sergeant-bugler, sergeant, corporal, bugler, private. Like other volunteer corps, the Volunteer Medical Staff Corps has a permanent staff

*One company is already formed, the Haunts Company Militia Medical Staff Corps.

from the regular army, consisting of an adjutant—who is a surgeon-captain of the army medical staff,—an acting sergeant-major, and sergeant-instructors who are non-commissioned officers of the Medical Staff Corps. Originally, the Volunteer Medical Staff Corps consisted of only one division company in London; but there are now companies in Edinburgh, Woolwich, Manchester, Maidstone, Leeds, Aberdeen, Norwich, and Glasgow. Since the organization of volunteer infantry brigades in 1888, a brigade-surgeon has been appointed on the staff of each brigadier-general, who is responsible to the Director-General through the principal medical officer of the district, and has under his orders the regimental surgeons of the several corps forming the brigade; under this system also brigade bearer companies have been formed, composed of men taken from the fighting ranks, no provision having as yet been made for volunteers to qualify as efficients otherwise than through the usual training and drill with their corps, and they are trained in ambulance work as secondary duty.

By royal warrant dated February 18th, 1888, an Army Medical Reserve of officers was established. In the Secretary of State's instructions on the warrant, it was laid down that medical officers of the militia, yeomanry, and volunteers, on electing to join this reserve, should undertake to perform any duties at home at the rates of remuneration laid down for civilian medical practitioners in the royal warrant for pay, and that officers of the Army Medical Reserve would have a prior claim to employment in the district in which they reside, over other medical officers of the auxiliary forces or civilian practitioners. The medical officers on the retired list, who are liable to be recalled to service, are shown in the quarterly official army list; as is also the army medical reserve of officers of the ranks, from surgeon-lieutenant to surgeon-lieutenant-colonel. Promotion is given regularly according to length of service on fulfillment of the prescribed rules.

Candidates for services in the Army Medical Staff on the west coast of Africa enter under the same qualifications as for the Army Medical Department generally, except that they may be admitted at a later age. They are required to complete three years' service on the coast, after which they will be eligible for general service. For each year's service on the coast, an officer is entitled to a year's leave at home on full pay, and each year or portion of the same served on the coast reckons double towards volunteer retirement on retired pay.

The Nursing Service is divided into three grades: Lady superintendents, senior nursing sisters (or acting lady superintendents), and nursing sisters. No candidate for the appointment of nursing sister may be under twenty-five or over thirty-five years of age, and each applicant must produce an extract from the register of her birth, or, in default, a declaration made before a magistrate by one of her parents or guardians, giving exact age; must also produce a recommendation from some person of social position, not a member of her own family, as to standing in society, and some testimony as to possession of tact, temper, and ability qualifying for appointment; must sign a declaration showing whether she is single, married, a widow, or member of any sisterhood or society; must produce a certificate of health and evidences of having had at least three years' preliminary training and service combined, in an approved civil hospital, where adult male patients receive medical and surgical treatment, and in which a staff of nursing sisters, under a matron, is maintained; finally, must produce certificates of efficiency in medical and surgical nursing from the medical officers under whom she has served. Nursing sisters are retired after the age of sixty years, on a pension; if disabled in the service before that age, the amount of pension or gratuity is regulated by the length of service. They are rationed and allowed a uniform free of all expense, and also certain allowances for washing and attendance. They are placed under a strict discipline, their duties being very fully defined, and the lady superintendent—or the acting lady superintendent—is responsible to the principal medical officer for their work. Nursing sisters serve abroad, and are detailed for foreign service by the Director-General, as far as the exigencies of the service will permit, according to a roster.

The existence in peace of a body of military medical officers, and of a corps of trained orderlies and sick-attendants, is essentially

necessary; more particularly so to the British service, owing to the varied conditions under which that army is called upon to serve. The duties of the medical staff comprise: The general treatment of the sick, officers, men, women, and children; careful observation and regulation of the sanitary surroundings of the soldiers, bearing in mind the various conditions of service in climates of widely varying character; prevention as well as the treatment of disease; examination and passing of recruits for the Army; invaliding of men who are physically unfit for further service; management and control of the various classes of hospitals, general hospitals, station hospitals, hospitals on board ships, lunatic hospitals, hospitals for women and children; supervision and control of all officers and men, both patients and those doing duty in these various hospitals; the command, discipline, and interior economy of the Medical Staff Corps.

In these days of progress and improved education, knowledge of sanitary science and of the ordinary rules for the preservation of health is almost universal among all classes; the duty, consequently, of a medical officer in advising his general, or other commanding officer, upon sanitary questions, is much lightened and facilitated. Old prejudices are disappearing; there is less friction, and both commanding and medical officers understand each other on these points, and work together for the common good of the soldiers. It is the practice to place medical officers in immediate charge of the troops in certain sections of a garrison, and by this means—if not changed too frequently—they become acquainted with the localities and with the several commanding officers, between whom and these medical officers it is very desirable there should be frequent periodical communication, whereby the interests of the service may be best compassed.

Junior medical officers are not placed in actual charge of regiments on home service, though in India this is sometimes done. The adoption of the station hospital system has rendered the old system in this respect unnecessary, though it is undoubtedly a fact that it would be most desirable for young officers to be attached regimentally for a fixed period, and there gain an insight into regimental ways and the inner working of the soldier's daily life, as a good preparation for the responsible duties referred to in the previous paragraph.

General hospitals are organized for the reception of invalids from India and abroad, the sick of corps at stations, and all entitled or especially authorized to be admitted into military hospitals. There is also separate and special accommodation for sick and wounded officers. The general hospitals in England are: The Royal Victoria Hospital at Netley, and the Herbert Hospital at Woolwich.

Station hospitals are established for the reception and treatment of sick from all corps in garrison, auxiliary troops when embodied, and all other persons who may be admitted under special sanction; each is commanded by a medical officer appointed by the Director-General, usually a surgeon-lieutenant-colonel or a surgeon-major, subject to the general officer or other officer in command of the troops at the station. An establishment of officers of the medical staff, and warrant officers, non-commissioned officers and men of the medical staff corps, is provided for each hospital, according to its requirements.

Station hospitals are equipped according to schedules laid down. Under certain conditions they are non-dieted,* as in some barracks where the station hospital is some distance off; they are called "auxiliary" or "convalescent" hospitals, and contain a few beds for cases of accident, or the like, and an inspection room where the medical officers in local charge can examine soldiers, or others who report themselves sick.

Hospitals on board ships are organized and conducted similarly to non-dieted station hospitals, the equipment in each case being placed by the Admiralty.

Lunatic hospitals are only established in connection with general hospitals, and are administered under similar regulations; they are subject to the authority of the Commissioners of Lunacy.

Hospitals for soldiers' wives and children are organized and administered as station

---

*In dieted hospitals the patients are fed according to a special scale of diet.

hospitals. These are much assisted by the kindly interest taken in them by officers' wives and other philanthropic persons, and are not wholly maintained by government, special funds for their support being raised by voluntary contributions, and valuable assistance given, both in money and kind.

In time of war, the duties of medical officers and the Medical Staff Corps are, as a rule, of an exceptionally arduous and responsible nature. A large proportion of the active military service in which British troops are engaged, is performed in tropical and unhealthy countries, against savages to whom the Geneva Convention and the courtesies of modern warfare are unknown; consequently, sick and wounded cannot in case of emergency or retreat be left to the care of the enemy, but must be carefully guarded and treated and removed to a place of safety, since abandonment would result only in torture and death. The arrangements for medical assistance with an army in the field are: A medical officer with each unit, regiment, body of artillery, corps, or staff, who has at his disposal the trained regimental stretcher-bearers, two per company or troop. To each brigade a bearer company is attached, and there is one field hospital. To each division an additional field hospital is allowed. For an army corps the medical establishment consists of ten field hospitals and six bearer companies, exclusive of the regimental aid. In addition to this, a certain number of officers of the medical staff are utilized for staff purposes, and are shown in the lists of field establishments. With a cavalry division, which is considered separately from the army corps, there are two bearer companies and three field hospitals.

The entire medical service is under the command of a Surgeon-Major-General, who is included with the staff of the General commanding the line of communications, and subject to the authority of the General commanding-in-chief. When a soldier falls wounded in the fighting line, he is reached and attended to as quickly as possible by the medical officers attached to the regiment or corps, carried or assisted to the collecting-station, and handed over to the bearer company. The collecting-station is the advanced post of pack-animal ambulance transport and the various forms of wheeled carriage, and is usually in charge of a non-commissioned officer who has a small supply of restoratives for the more seriously injured. To this point all the wounded are conveyed, and are placed on the transport vehicles, to be passed on to the dressing-station, about 1500 to 2000 yards from the fighting line. The dressing-station is specially adapted for relieving the most seriously wounded, restoring those who are exhausted, and for performing necessary operations; it is provided with a tent and medical and surgical panniers. The staff consists of two or three officers of the medical staff, according to the regiments, and ten non-commissioned officers and men, including a cook. The transport and attendance on the wounded from the fighting line, through these two posts of succor, is performed by the bearer company. These two stages comprise the "First Line of Assistance." From the dressing-station the wounded are passed, by road or railway, to the field hospital, which is placed in some suitable position beyond the range of fire, or under cover from it. There is here provision for men to remain two or three days if necessary, and they may be either discharged to duty again or passed to the base hospital along the line of communication. The duration of the transit depends upon the distance of the fighting line from the base, and the nature of the transport used; this forms the "Second Line of Assistance." When the distance is great, hospitals on the line of communication are formed, and the journey of the sick and wounded is made by stages to the base. The base hospital is formed usually at or near the port of embarkation for England, and consists of a large staff with every possible appliance for care and treatment of the wounded; this forms the "Third Line of Assistance." Invaliding boards are held regularly at the base hospital, and the sick and wounded are either returned to the front or sent home; and with the object of meeting the requirements, hospital ships are equipped, so that the soldier lacks nothing to give him the best possible chance of recovering from the effects of climate or injuries. The last stage is disembarkation in England, and transfer to the Royal Victoria Hospital at Netley, or some other hospital.

One most important fact must be noted,

and that is the much greater distance now, in contrast to former days, between the fighting line and the dressing-station. The carriage of a man of ten to twelve stone, these distances, over rough and uneven ground, requires bearers of good physique. The introduction of smokeless powder, and the increased velocity and range of rifle fire, will doubtless greatly modify the arrangements for the removal of wounded men from the field. Various theories have been propounded; but so much depends on the tactics and methods of attack that may be found practicable under the new conditions, that only practical experience is likely to show what will be the best system for ambulance work.

(*To be continued.*)

THIRTEEN FEET OF INTESTINE TORN AWAY.

A few weeks ago I was called to see a lady who had either performed an abortion on herself or some one had done so for her. The fœtus had been delivered, but the placenta remained in the cavity of the uterus. A physician was called, who discovered something protruding from the os, and, upon investigation, found it was an intestine. There was considerable hæmorrhage and very severe pain, with the prospect of speedy death. I found the pulse and respiration very rapid and a profuse hæmorrhage from the vagina. As soon as possible I opened the abdomen, and found the uterus about the size of a five months' pregnancy and very soft, the abdominal cavity quite filled with blood. Upon lifting the uterus out I discovered, on its posterior surface, an opening, through which passed a loop of small intestine. This I immediately withdrew; its mesentery had been stripped entirely off. One end of the intestine had been torn from its attachment to the cœcum. I inserted my finger into the cavity of the uterus, and, finding the placenta, delivered it, enlarging the opening. I cut off the intestine at the point where the mesentery stopped, making a lateral anastomosis with the cœcum on the opposite side. I then closed the wound. Thirteen feet of the intestine had been drawn through the opening in the uterus. The patient died at 12.30 A.M., one remarkable feature being that she survived the injury and subsequent operative procedure over eight hours. — DOCTOR C. B. NICHOLS, in *Occidental Medical Times.*

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., NOVEMBER 11th, 1895.

Editorial.

TREATMENT OF MALIGNANT TUMORS WITHOUT THE KNIFE.

For years there has been a persistent attempt on the part of the medical profession to eradicate malignant growths without resorting to radical operation. That these efforts have rarely been attended with success, is evident from the fact the knife still obtains general preference; moreover, there are certain growths which cannot reasonably be expected to come within the scope of anything but active surgical measures.

To be sure, where growths are small and unaccompanied with any marked infiltration of surrounding tissues, they may often be most readily relieved by caustics, among which caustic potash, Vienna paste, lactic acid —and other agents of like character—have received first place; and here it may be proper to register an individual preference for lactic and chromic acids, and also a belief that of the two, the latter, when employed judiciously, possesses special advantages, particularly as regards gynæcological work.

A fact that seems to have escaped general attention is that cancerous tumors of considerable size have been, in a few instances at least, permanently relieved without the knife, and without the horrible ulceration and injury to health that accrue to usual non-operative measures. In the *Medical Times and Gazette* for September, 1866, Doctor W. H. Broadbent called attention to the possibilities of Acetic Acid as an interstitial injection in the removal of malignant growths, and cited

a number of cases in which permanent relief had resulted from its employment.

One case, carcinoma of the breast, of two years' standing, was operated upon in August, 1865—that is, removed by the knife. In the succeeding May a new tumor, growing more rapidly than ever, appeared under the cicatrices of the former operation, the conditions being such that further use of the knife was inexpedient and inadvisable. In this instance, unless something could be done, a miserable fate awaited the patient. Finally Doctor Broadbent bethought himself that it might be possible to inject the tumor with some fluid that would tend to so far alter its structure and modify its nutrition as to retard or arrest its growth. After due deliberation Acetic Acid was selected, for the reason, as he says:

> That as it does not coagulate albumen, and might be expected to diffuse itself through the tumor, the effects would not be localized at the point of injection:
>
> If it entered the circulation it could in no way do harm.—As the tendency of Acetic Acid is to rapidly dissolve the walls and modify the nuclei of the cells on a microscopic slide, it might reasonably be expected to do the same to cells *in situ:*
>
> Finally, Acetic Acid is often applied with advantage to common ulcerations.

Accordingly, on the 18th of May the first injection was made, the tumor now being the size of a small egg, with a patch of skin about the size of a twenty-five cent piece adhering thereto. The hypodermatic needle was introduced into sound tissue an inch or more from the part involved, and pushed on into the centre of the diseased mass, when thirty minims of a fluid composed of one part of Acetic Acid and two of water were injected; there was little or no pain. The next morning a bulla containing dark bloody fluid was found to occupy the patch of adherent skin. Five days later this portion of the skin was dry, hard, and horny; the adjacent part of the tumor more soft than formerly. The injection was now repeated.

Three weeks after the first injection (the patient not having been observed for a fortnight) it was found the piece of skin before mentioned was detached from surrounding tissues, and also that a probe could be passed in all directions to a distance of three-quarters of an inch or more between the tumor and healthy structures; there was likewise a slight discharge from the fissure. Now a third injection was made, and two days later a fourth, the strength of the solution being slightly increased—that is, one-quarter less water was added to the Acid; the procedure now gave rise to transient pain, speedily followed by swelling and tension of the contiguous parts. Four days after this last operation a free discharge of fluid was established, with more or less sloughing of solid portions; there was consequent relief from swelling, and notably no fœtor.

After the lapse of another fortnight the tumor was much reduced in size, and a probe on being passed into the fissure entered a large cavity extending on all sides; part of the wall seemed free from malignant structure, though at several points crusts of cancerous deposits remained. Another attempt to inject was futile; the cancerous material was too thin to retain the fluid, which either entered the fissure, causing great pain, or made its way into the cavity; consequently the latter was packed with lint freely saturated with dilute acid. The case was now turned over to the care of the family medical attendant, with directions to inject whenever he saw opportunity.

Two months after the first injection—viz., July 13th—the attending physician reported no impression being made on the remaining disease, and that he fancied, on the contrary, it had somewhat extended.

Doctor Broadbent now for a few days tried carbolic acid as an application, but soon discontinued it as unsatisfactory; he returned to dressing daily with strong Acetic Acid, and to the injections as often as opportunity offered.

In the early part of the succeeding August the patient had considerable hæmorrhage, necessitating its arrest by the application of sesquichloride of iron. In September the results of the treatment were very apparent: there was every evidence that the final remains of the malignant growth had been eradicated; healthy granulating surface was apparent everywhere, which soon healed. This appeared to be a permanent cure.

Subsequently other cases were treated with equal success. Doctor Broadbent, however, recognized the fact that many forms of ma-

lignant growth are not amenable to these measures, for reasons obvious. He considered, however, frequent application of dilute Acetic Acid preferable to the use of the stronger, and would have great hesitation in attempting by this means the destruction of any tumor that had not involved the skin.

The foregoing certainly commends itself both on physiological and mechanical grounds. The purpose, manifestly, is not to secure necrosis of the malignant growth—which always accrues to so-called "cancer pastes,"—but modification of nutrition; and the theoretical grounds upon which this is based are that "cancer owes its malignancy to its cellular or fœtal structure; that Acetic Acid is an agent which may reasonably be expected to diffuse itself through the growth and, reaching the cells, to effect changes in their constitution and vitality, while yet being free from any deleterious influence."

From some personal experience with this treatment during the last thirty years, we believe it to be applicable to many cases. We have often found dilute Glacial Acetic Acid preferable to the ordinary commercial product. One case thus treated is particularly notable—that of an individual nearly ninety years of age, with malignant tumor of the breast that had reached the ulcerating stage; any question as to its malignancy will appear to be set at rest, since its character had been passed upon by no less personages than Willard Parker, James Wood, and Lewis A. Sayre. In this instance the Acetic Acid speedily segregated the diseased mass from the surrounding sound tissues, which put an end to any further attempts at interstitial injection—the fluid would pass out into the fissure. Daily application was then made of Glacial Acetic Acid with a brush, for a period extending over some six or eight months, and with the result that the growth was slowly but completely eradicated. A peculiarity of the Glacial Acid appears to be that when reduced one-half with water it has little or no effect upon healthy tissues, while upon morbid products it remains extremely active.

Other cases were treated on the same general line, with great satisfaction both to operator and patients. That favorable results are not inevitable will be readily understood; furthermore, one of the greatest drawbacks to this method is that so few sufferers possess the patience necessary to submit to careful test. Probably eight-tenths of all on whom this method was tried passed into other hands for this very reason, some to receive temporary relief by the knife; and not a few gravitated—as the majority invariably do—into the hands of cancer quacks, with the usual unfortunate termination.

One most unfortunate case was that of a stout, healthy French Canadian, fifty years of age, with "smoker's cancer." After two months, and when the treatment was most promising, he became the victim of a charlatan. A few months later he returned with a much aggravated lip and presented all the evidences of acute arsenical poisoning. For this latter he was put under treatment, no attempt being made to interfere with the malignant growth. No sooner, however, was he recovered than he again placed himself in the hands of the charlatan, more from anxiety to realize upon the investment he had already made in this direction than anything else. In a very short period of time he again gave evidence of arsenical poisoning, and the malignant growth had become so much extended there was no hope except through the knife. With a persistence worthy of a better cause the patient again resorted to the charlatan, but, finally becoming alarmed, visited Quebec, where he was operated upon, losing the entire lower lip and a large portion of the tissue of the left lower face. The disease, however, had apparently become stimulated to unusual activity, and its malignancy increased, by the treatment received at the hands of the cancer quack, and the man speedily succumbed—the growth at last involving thyroid, larynx, and deep tissues of the whole left neck.

Mention has already been made of the use of chromic acid in gynæcological practice. Many appear to prefer the acid nitrate of mercury, and this agent at one time received an undue degree of prominence in this class of practice owing to its recommendation by the late J. Marion Sims. Personal experience, however, has proven it a most uncertain and likewise dangerous agent. There are many cases in which lactic acid may be preferable to chromic, yet in general the latter is superior if judiciously applied,

and there is no agent which is so satisfactory in the treatment of apparently hopeless malignant disease of the female genital tract. By its means life may be made not only tolerable, but further prolonged for a number of years; and, finally, in some few instances permanent relief may be secured.

IN RE ANTI-DIPHTHERITIC SERUM.

Except those based upon reports of hospital experience, the statistics heretofore published regarding this agent merely include a few insufficient cases, and consequently have been so incomplete as to be of no practical value. It is therefore a matter of some interest to be able to present statistics derived from private practice. Recently M. Eulenberg, before the Berlin Medical Society, presented a report extending over a period of six months, viz., from October 1st, 1894, to March 31st, 1895, that has to do entirely with diphtheria outside of hospital wards. His statistics cover 10,240 cases, of which 5790 received anti-diphtheritic serum, the remainder being subjected to other methods of treatment.

Of the group of 5790 which received the serum, he reports that 552 died—a death-rate of 9.5 per cent. Of the second group, who received the other methods of treatment, 652 died—that is to say, a per cent. of 14.6.

In one instance a publisher, in commenting upon this report, seeks to call attention to the fact that cases treated by means of the serum were all very serious. This, however, seems to be an error, inasmuch as Eulenberg declares the epidemic in Berlin during the winter of 1894–95 was a mild one.

Further analysis of Eulenberg's statistics evidences that the death-rate in children under two years of age who submitted to the serum treatment was 21.7 per cent.; between two and ten years, 8.8 per cent.; and over the latter age, 4.1 per cent. The fatality among those who did not receive the serum represented, of those under two years of age, 39.5 per cent.; from two to ten, 15.2 per cent.; and over ten years, 3.8 per cent.

Eulenberg concludes: "As a general thing the death-rate among children of a certain age, and among grown persons, was very low during the last epidemic. The success of the serum treatment was proportionate to the promptness with which it was begun—thus the total death-rate among those who received the serum upon the first or second day of the disease was but 4.2 per cent., while among those who received it on the third day the per cent. rose to 16 8." He adds:

> In spite of the discredit which certain mishaps—which it would certainly be wrong to conceal—have thrown upon the serum treatment of diphtheria, this medicament appears the most efficacious yet known, and in it physicians will find their most reliable weapon against this terrible disease.

In a measure corroborative of the foregoing, is the report of Doctor Zabolotnui, of the District of Podolia, Russia. In 109 cases serum was employed, with only fourteen deaths, a percentage of 12.8.—In previous epidemics the percentage had averaged 48 per cent. Also prophylactic injections were employed in 228 cases, none of which contracted the disease. Zabolotnui himself contracted the disease and underwent the serum treatment with apparently most satisfactory results. He describes his rapid improvement after the first injection, the disappearance of headache and the apathetic state into which he had fallen, with corresponding rise in spirits and improvement in all specific symptoms. The temperature fell from 101° to normal after the first injection.

Doctor W. H. Park recently presented before the New York State Medical Association a paper under the title of "Recent Studies in Diphtheria and Pseudo-diphtheria," with statistics tending to show that his employment of serum was highly beneficial. He further declares that the mortality in New York City, which for years averaged 34 per cent., and never less than 25 per cent., has during the last nine months been reduced to 17 per cent.; and that if the serum "had been used in all cases, the mortality would have been less than 10 per cent."

It is unnecessary to comment upon these figures, which appear to be of the most radical character. Judgment must be passed thereupon by every individual for himself in the light of his own knowledge and researches.

EDITORIAL NOTES.

Corsets and Chlorosis.—

No less an authority than Professor O. Rosenbach, of Breslau, declares that during recent years the number of chlorotics, everywhere throughout the civilized world, has greatly increased; and he unhesitatingly pronounces the corset the prime cause.

The compression which this useless article of dress — which renders all women of one shape and conceals the true outlines of the female form divine—exerts upon the abdominal and thoracic organs, prevents full play of the respiratory powers and thus reacts on the function of hæmatosis. Further, the action of the muscles of the back is interfered with — being deprived of all activity they speedily lose their power, and hence provoke the feeling so aptly expressed by ladies of "falling apart" when stays are laid aside. It seems full time that stays, high-heeled shoes, and certain other useless dictates of fashion, should be thrown aside. It is certain our women will be both stronger and healthier for such reform.

Why!—

We have been asked why the *Journal* does not print a list of pamphlets and reprints received each month. Our answer is, that to do so would require at least half a page of small type, and that in nine-tenths of the cases the only end attained would be the advertisement of some nostrum. Somewhere in the last three pages of almost every reprint we receive, there is a nucleus wherein some nostrum —good, bad or indifferent—is recommended. The *Journal* sells advertising space and gives its patrons as much consideration as is proper.—*Ohio Medical Journal.*

As several like queries have been propounded to THE MEDICAL AGE, we publish the above as exemplifying the situation.

French Brandy.—

Doctor Laborde recently read a paper before the Académie de Médecine, of Paris, on the liquor supplied to the French Army under the name of *Cognac*. The best cognac is made of the cheapest and worst spirit, flavored with oil cognac ("Bouquet de Cognac"), which in turn is derived from castor-oil, cocoanut-oil, and other fatty substances treated with nitric acid. "Pure Jamaica rum," sold by an English house, proved, on analysis, to be of much the same quality.—*Medical Record.*

Attention has several times, in these columns, been called to the fact that there is no longer any brandy in market fit for medicinal use.

Advantages of Artificial Butter.—

An examination of the two products, butter and oleomargarine, for microbes, reveals an average in the former of from 700,000 to 1,500,000 to the grain, against 25,000 to 40,000 in margarine. Cold, moreover, reduces the microbes in margarine thirty-three per cent., and in butter but three per cent. Pathogenic bacteria are harbored by true butter, but not by its margarine imitation.

The Retort Sarcastic.—

One medical gentleman publishes the statement that in an experience of twenty years he has never lost a case of smallpox. The editor goes him one better by adding he has had longer experience with equally good results, but—*he never had a case upon which to try his skill.* The foregoing suggests that dogmatic assertions often contain more sound than sense.

Time for Active Suppression.—

Some of the prescriptions given by "the great dailies" who run a "medical column" are quite able to play the deuce with the people who take them seriously, even to giving the undertaker a job.—*Homœopathic Recorder.*

There seems to be a craze among all classes to "dabble in physic," and this is fostered in no small degree by the countenance given proprietaries and patents by the profession.

"The Leucocyte."—

This is the title of a monthly published by the students of Detroit Medical College, and devoted to college affairs generally. The issue for October, 1895, contains an excellent full-page portrait of our esteemed *confrère*, Doctor E. L. Shurly.

Louis Pasteur.—

This well known Frenchman, the founder of microbian pathology and of "Pasteur Institutes," is dead. Doubtless his claims will still be pushed by his son in-law, Doctor Roux.

Atrophic Rhinitis.—

Doctor Joseph Gibb, in the *Medical News*, recently called attention to the value of Zinc stearate in the treatment of this malady.

Items and News.

Longevity and Activity.—

An item in an exchange reminds us that great men usually carry their full mental vigor and activity into their great old age—M. Chevreul, M. de Lesseps, Gladstone and Bismarck are evidences of this anthropological fact. Pius IX., although living in tempestuous times, reached a great age in full possession of all his faculties, and the dramatist Crebillon composed his last dramatic piece at ninety-four, whilst Michel Angelo was still composing his great canvasses at ninety-eight, and Titian at ninety still painted with all the vigor of his earlier years. The Austrian General Melas was still in the saddle and active at eighty, and would have probably won Marengo but for the inopportune arrival of Desaix. The Venetian Doge, Henry Dandolo, born in the beginning of the eleventh century, who lost his eyesight when a young man whilst on an embassy to Constantinople, through the treachery of the Greek Emperor Manuel, was nevertheless subsequently raised to the highest office in the republic, managed successfully to conduct various wars, and at the advanced age of eighty-three, in alliance with the French, besieged and captured Constantinople. Fontenelle was as gay-spirited at ninety-eight as in his fortieth year, and the philosopher Newton worked away at his tasks at the age of eighty-three with the same ardor that animated his physical prime. Cornaro was as happy at ninety as at fifty, and in far better health at the age of ninety-five than he had enjoyed at thirty. These cases all tend to show the value and benefits to be derived from an actively cultivated brain in making a long life one of comfort and of usefulness to its owner. The brain and spirits need never grow old, even if our bodies will insist on getting rickety and in falling by the wayside, but an abstemious life will even drag that old body along to centenarian limits in a tolerable state of preservation and usefulness.

The foregoing list can be lengthened out with an indefinite number of names, but it is sufficiently long to show what good spirits and an active brain will do to lighten up the weight of old age. When we contemplate the Doge Dandolo at eighty-three animating his troops from the deck of his galley, and the brave old blind king of Bohemia falling in the thickest of the fray at Crecy, it would seem as if there was no excuse for either physical, mental or moral decrepitude short of the age of four-score and ten.—*National Popular Review.*

The "Gold-Cure."—

Reverend Doctor Buckley, the learned editor of the *Christian Advocate*, has made a serious attempt to investigate the therapeutic value of the so-called "gold-cure." He sent out letters of inquiry to a large number of physicians and clergymen, and received replies from ninety-three in all. Through these he obtained reports of 534 cases of inebriety treated, of which 275 remained cured and 251 relapsed. This gives a proportion of cures of 51½ per cent., and it might be said that if fifty per cent. are cured, something is accomplished; but the answer is that the same result can be secured by ordinary measures not involving the resort to secret preparations. Of 100 drunkards who deliberately and honestly desire to break up their habits, surely over half will be rescued by measures known to the profession. As two-thirds of Doctor Buckley's correspondents were clergymen, and many of these were *ardent believers in the treatment*, the percentage of cures obtained by the inquiry is probably too high. Even admitting it to be as high as fifty, the validity of the claim that the "gold-cure" is a specific is surely disposed of.—*Medical Record.*

Scientific Foods.—

The "scientific food" theory has had a setback, having been "weighed in the balance and found wanting." A detachment of fifty men of the United States Army were sent out for a three days' march with "scientific rations" in their haversacks—little tablets of highly concentrated essences of coffee and bread—which, it was imagined, would be as serviceable as the bulkier drink and food in their usual form. At the end of the first day, forty men were doubled up with cramps—their digestive organs could not assimilate the concentrated food, or were not satisfied with it, so the experiment was a failure.

Man cannot exist upon a chemical diet, for the plain reason that he is a man and has physical requirements and functions which demand food in other form. Much may, of course, be done by science to improve food supply, to render it more wholesome, more efficient, perhaps more convenient and portable, but beyond such limits it can scarcely go. Bread is the "staff of life," and, with meat, fruit, vegetables, and other adjuncts, is apparently destined to remain so to the end of time.—*New York Tribune.*

Mr. Gerald Balfour's Pretty Wit.—

Since a death at Hyde, England, of a boy who had gone through a course of hydrophobia treatment, yet was declared to have

died of the disease, there has been a big crop of remedies brought forward. The last was revealed to the House of Commons recently, when Mr. Farrell asked the Chief Secretary for Ireland whether he was aware that Philip Movern, of Glan, County Cavan, possessed a specific herbal remedy which had "resulted in the cure of thousands of cases since the days of King Charles I.," and whether, "having regard to the necessity of doing something to cope with the increase of rabies, the Government would cause an inquiry to be made into the efficacy of this remedy, with a view to its adoption and use in some central hospital in Dublin or elsewhere." Mr. G. Balfour replied that he must maintain the same attitude of cautious reserve which, to judge from the Honorable Member's question, had been observed by every Irish Government from the days of Charles I.—*Chemist and Druggist.*

Canadian Medical Association.—

The officers for 1896 are: Doctor J. Thorburn, Toronto, President; Doctor Small, Ottawa, Treasurer; Doctor Starr, Toronto, General Secretary. Vice-Presidents: Ontario—Doctor Fife Fowler, Kingston; Quebec—Honorable Doctor Marceil, Quebec; New Brunswick—Doctor W. W. White; Nova Scotia—Doctor William Tobin; Manitoba—Doctor Chown, Winnipeg; North-West Territories—Doctor Butt, Calgary; Prince Edward Island—Doctor Tranburton; British Columbia—Doctor McKechnie. Local Secretaries: Ontario—Doctor John Mathieson, St. Mary's; Quebec—Doctor McCarthy, Quebec; New Brunswick—Doctor Christie, St. John; Nova Scotia—Doctor Jones, Halifax; Manitoba, W. J. Wilson, Winnipeg; North-West Territories—Doctor McDonald; British Columbia—Doctor W. H. Richardson; Prince Edward Island—Doctor H. D. Johnson.

Hyperpyrexia.—

The normal temperature of the human body is 98.6° F., with a range in disease, usually, of eight to ten degrees above and two or three degrees below that point. Statements of wider departures from the normal than these are usually received with some feeling of skepticism. However, the number of cases recording excessively high temperature is becoming so great that credence must be given them. We gave a *résumé* of such reported cases in April, 1893. Another case is now reported, by Doctor H. Morgan Miles, Jonesville, Va., in the *Louisville Medical Monthly* for April, 1895. In a girl, six years old, with diphtheria, under careful and entirely competent observation, the thermometer registered as high as 115° F. Three instruments, from different practitioners, confirmed the record. The patient recovered.—*Medical World.*

Microbes and Disease Demons.—

The most ancient and widespread theory of disease is the demon theory. The disease demon has now reappeared as a germ. Some thirty-six diseases, many of which are the most terrible which afflict men and animals, are attributed by bacteriologists to micro-organisms. I cannot think it can ever be true scientific medicine to pour poison into the blood current to counteract other poisons; we may in one sense convey an antidote, but we may work untold mischief by our ignorant meddling, which we have no means of combating.—Edward Burdoe, L.R.C.P. (Ed.), M.R.C.S.

Inebriety.—

Montyel concludes, inebriety is curable in one-third the cases. The basis of treatment is complete, compulsory, prolonged abstinence—without this method there is no chance of recovery. This abstinence should be supplemented by treatment of the condition of the nervous system of which inebriety is the symptom. The patient should be placed under discipline, subjected to an efficacious surveillance, and the duration of treatment should be at least one year.—*Alienist and Neurologist.*

No Material Difference.—

A gentleman gave a party in honor of a celebrated missionary. The ladies appeared in very *decolletté* dresses, and the host, fearing the style might shock his reverence, apologized, saying that fashion demanded it. "Oh, I don't mind it at all," replied the missionary; "I've been ten years among the savages!"—*Exchange.*

Troubles in the Community.—

The coal dealer died of colitis;
The twine-maker had the chord-ee;
The farmer's attack of oat-itis
And rye-neck was painful to see;
The wheelman went blind with cyclitis,
The bridge-builder suffered from piles,
The servant girl had Sal-pingitis,
And the cook was all covered with b'iles.

—*Southern Medical Record.*

Archives of Pediatrics.—

This journal will commence its thirteenth year with the January number, when it will be published by E. B. Treat, of New York City. Doctor Crandall will, as heretofore, remain supervising editor.

Book Reviews.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

The November number contains three short stories of exceptional quality: "In Harvest Time," by A. M. Ewell; "The Apparition of Gran'ther Hill," by Rowland E. Robinson; and "The Face of Death," by L. Dougall. There are also installments of Gilbert Parker's serial "The Seats of the Mighty," and Charles Egbert Craddock's "The Mystery of Witch-Face Mountain."

Worthy of especial mention is George Birkbeck Hill's "Talk over Autographs," and Lafcadio Hearn's "After the War." Most interesting but Utopian is Walter Mitchell's "Future of Naval Warfare." Mr. Peabody, in "An Architect's Vacation," discusses the Italian Renaissance; Woodrow Wilson contributes a readable paper under the title "A Literary Politician." Poems, book reviews, and the usual departments complete the issue.

THE CENTURY. Price, 35 cents; $4.00 a year. The Century Co., New York.

Contents for November are: "Life of Napoleon Bonaparte," by W. M. Sloane; "The Devotion of Enriquez," by Bret Harte; "On Account of Emmanuel," by B. N. Taylor; "Equality as the Basis of Good Society," by W. D. Howells; "The Issues of 1896," by Theodore Roosevelt and W. E. Russell; "The Missionary's Story," by J. G. Vibert; "Kaiserwerth and its Founder," by Eleonora Kinnicutt; "The Tragedy of the Comedy," by the author of The Cat and The Cherub; "The Fiercest Beast of Prey," by Reginald Gourlay; "Music in Solitude," by Richard W. Gilder; "Robert Louis Stevenson, and His Writing," by Mrs. S. Van Rensselaer; "Eleonora Duse," by J. R. Towse; "Sir George Tressady" (chapter I), by Mrs. Humphrey Ward; "The Armenian Question," by James Bryce.

LITTELL'S LIVING AGE. Price, 15 cents; $6.00 a year. Littell & Co., Boston.

The publishers of this well known eclectic announce a reduction in price from $8.00 to $6.00 per year, the change to take effect with January 1st. New subscribers, however, remitting before that date will receive the intervening numbers of 1895 free.

The *Living Age*, now near the close of its fifty-second year, has ever been the faithful mirror of the times, reflecting only that which was highest and best and most desirable in the whole field of literature. It has received the commendations of the highest literary authorities, the most distinguished statesmen, the brightest men and women of the country, and has proven a source of instruction and entertainment to many thousands. It commends itself especially to busy people of moderate means, for they will find in it what they cannot otherwise obtain except by a large expenditure of time and money, yet which is so essential to every one who desires to be well informed concerning all the great questions of the day.

Recent issues maintain its reputation. To enumerate all the choice articles in the October numbers, for instance, would be to give their full tables of contents. We can only add what has so often been said, that even at its old subscription price no intelligent reader can afford to do without this periodical.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The chief contents for November are: "Landmarks of Manhattan," by Royal Cortissoz; "The Late War in Europe," by H. P. Robinson; "Some Thanksgiving-Time Fancies," by B. W. Clinedinst, J. M. Gleeson, W. R. Leigh, Henry McCarter, and Howard Pyle; "Professor von Helmholtz," by C. R. Mann; "The Ruin of the Year," by A. Lampman; "The Logic of Mental Telegraphy," by Joseph Jastrow; "Wood Engravers," by Florian; "The Conduct of Life," by Robert Grant; "A History of the Last Quarter-Century in the United States"—VIII—by E. B. Andrews; "Frederick MacMonnies," by W. H. Low; "The Amazing Marriage," chapters XL–XLIV, by George Meredith; "The Colonel's Tea-Party," by Bessie Chandler; "The Point of View."

SUN AND SHADE. Price, 40 cents; $4.00 a year. New York Photogravure Co., New York.

The March number contains a representation of the "Meyer Madonna" from a painting by Hans Holbein—this is also known as "Burgomaster's Madonna;" "La Vierge de Seville," from a painting by Murillo; "La Belle Jardiniere" is from a painting by Raphael, from the Louvre's collection; finally there are five plates representing the world-renowned painting by Hoffmann of Berlin, of "Christ in the Temple"—first is the complete picture, then follow four details, one representing Christ alone, one the High Priest, and one Two Expounders of the Law—all of which constitute remarkable individual studies.

THE ECLECTIC MAGAZINE. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The most notable articles in the November issue are: "The Church's Opportunity," by Canon Barnett; "Huxley in his Relation to Science, Education, and Sunday," by Mrs. Simpson; "Jingoism in America," by W. T. Stead; "Awakening of China," by M. R. Davies; "Fables," by R. L. Stevenson; "The Land of Frankincense and Myrrh," by J. T. Bent; "Unbiased View of the Armenian Question," by W. B. Harris; "The Political Situation in Italy," by Marchese de Viti de Marco; "Luminous Animals," by T. R. R. Stebbing; "Tyrannies of Private Life," by Mrs. E. Lynn Linton; "About Amber;" "Expressiveness of Speech," by A. R. Wallace, F.R.S. This is an unusually rich and interesting number.

MCCLURE'S MAGAZINE. Price, 10 cents; $1.00 a year. S. S. McClure, Limited, New York.

The November number presents the opening chapters of "The New Life of Lincoln," with forty illustrations; "A Story of Arctic Life," by Rudyard Kipling; "The Story of General Miles;" Anthony Hope's new novel, "Phroso;" and short stories by Ian Maclaren, Robert Barr, and Bret Harte. E. J. Edwards continues his papers on "Richard Croker and Tammany." "The Vailima Letters," by Mr. Sidney Colvin, is one of the best pieces of autobiography ever written, and is illustrated by photographs taken in the South Sea Islands, in many of which Mr. Robert Louis Stevenson personally appears.

AMERICAN NATURALIST. Price, 35 cents; $4.00a year. The Edwards, Docker Co., Philadelphia.

The original articles of the November issue are: "The Distinction between Animals and Plants," by J. C. Arthur; "Notes on the Reproduction of Plumularian Hydroids," by C. C. Nutting; "Antidromy in Plants," by G. Macloskie; "The First Fauna of the Earth," by J. F. James. There are also the customary general notes on Mineralogy, Petrography, Geology, Paleontology, Botany, Zoölogy, Entomology, Embryology, Psychology, Anthropology, Vegetable Physiology, Editor's Table, Recent Literature, and Scientific News.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Co., New York.

The November number contains a discussion of "The Vatican and the Peace of Europe," by J. A. Locke; Cleveland Moffett impartially describes "The Miracles of Saint Anne;" "Camera Caprices" describes and illustrates many of the illusions possible in photography; Lee J. Vance tells of "The Gold Fields of the South." The musical article discusses American Grand Opera, and Beaumont Fletcher analyzes the acting of Mrs. Potter. There is the usual farce, a detective story, tales of love and society, etc.

OUTING. Price, 25 cents; $3.00 a year. The Outing Publishing Company, New York.

The November issue appeals to the sportsman, angler, athlete—indeed, all lovers of out-door recreation—and likewise presents a fiction department above the average standard. Notable features are: "Rugged Labrador," by R. G. Taber; "Over Ifinger Joch," by J. P. Rudd; "A Ceylon Tracker," by F. F. Dixon; "A Ron d'Eau Masq'allonge," by E. W. Sandys; "The International Athletic Match," by W. B. Curtis; "Football of '95," by Water Camp.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

The first of a series of papers on the "Principles of Taxation," by David A. Wells, appears in the November issue. A discussion of "Primigenial Skeletons, the Flood, and the Glacial Period" is by H. P. Fitzgerald Marriott; "The Past and Future of Gold," by Charles S. Ashley. There are a number of quaint West African prototypes of the Uncle Remus stories, collected by the late Colonel A. B. Ellis, illustrating Evolution in Folklore.

THE ROYAL NATURAL HISTORY. Edited by Richard Lydekker, B.A., F.R.S., F.Z.S. Volume I, No. 6. Paper; 8vo; pp. 481 to 576. Price, 50 cents. Frederick Warne & Co., New York.

This issue of July 15th, 1895, completes the history of hyenas. Then the *Canidæ* are taken up—wolves, jackals, foxes, and wild and domestic dogs; of wolves the common, Indian, prairie, and Antarctic; the Abyssinian kaberu, black-backed jackal, side-striped jackal, and dingo. Domestic dogs are grouped as wolf-like dogs, greyhounds, spaniels, hounds, mastiffs, and terriers. In the first class are found the Eskimo dog, Hare Indian dog, Pomeranian (Spitz), sheep dog, collie, drover's dog, and pariah; in the second the English and Italian greyhounds, Scotch deerhound, Irish, Persian and Russian greyhounds, hairless dogs, and lurchers; in the third the field, Clumber, Sussex, cocker, King Charles, and Blenheim spaniels, Irish water-spaniels, setters, retrievers, Newfoundlands, and St. Bernards; the fourth includes bloodhounds,

stag-hounds, fox- and deer-hounds, harriers, otter-hounds, beagles, turnspits, dachshunds, pointers, and Dalmatians (coach or plum-pudding dogs); among mastiffs are classed the species of this name, the bull-dog, bull-terrier, boar-hound (miscalled "great Dane"), pugs, and Thibet dogs; finally, in the fifth class are the fox, Irish, Skye, Dandie Dinmont, Yorkshire, and English terriers, poodles, Maltese dogs, and Mexican lap-dogs. Next follow the various forms of wild dog; then the different varieties of foxes. The frontispiece, in water colors, is a most beautiful picture, true to life, of the common fox. A second colored plate portrays the African fennecs, which belong to the tribe of long-eared foxes.

METAPHYSICAL MAGAZINE. Volume I: January to June, 1895. Cloth; 8vo; pp. 570. Price, $2 50. Metaphysical Publishing Co., New York.

This volume represents the first half-year of the *Metaphysical Magazine*, a journal devoted to occult, philosophical and scientific religion—in other words, to a scientific examination of the laws of being, to a study of the operations and phenomena of the human mind, and to systematic inquiry into the factors, functions, nature and attributes of the soul. It numbers among its contributors such authors as Alexander Wilder, S. M. Miller, Samuel A. Binion, C. H. A. Bjerregaard, T. W. Rhys-Davids, W. J. Colville, L. C. Graham, Swami Vive Kananda, Henry Wood, W. C. B. Rudolph, Alice Le Plongeon, C. Stanilan Wake, J. Emory McLean, Alexander Fullerton, and Hudor Genone. Notable articles are: "The Abolition of Capital Punishment;" "A Vision of Being;" "Creation and Evolution;" "Building of a Brain;" "Comparative Study of the History of Religious Beliefs;" "Ethics of Mental Healing;" "Intuition and Divination;" "Re-incarnation;" "The Microbian Craze;" "Occult Principles of Existence;" "Physical Action in Levitation;" "Physico-Astronomical Theology of Easter;" "The Brain's Glebe;" and "Wonders of the Kabbalah."

"Unbiased by prejudice, undaunted by the tenacity of error and tradition, and free from the dominance of preconceived opinion," the *Metaphysical Magazine* certainly has a wide future before it.

THE YOUTH'S COMPANION. Price, $1.75 per year. Perry Mason & Co., Boston.

It is impossible in the limited space at our disposal to do anything like justice to the interesting announcements which this journal makes for the ensuing year. It is the ideal family paper—clean, interesting, educational. Not only are some of the most delightful story-writers permanent contributors to it, but many of the most eminent statesmen, jurists and scientists of the world have been engaged for the coming year—in fact, no fewer than three Cabinet ministers are announced, among them the Secretary of Agriculture, who has chosen for his subject "Arbor Day," the celebration of which he originated; Secretary Herbert will write on "What the President of the United States Does," and Secretary Hoke Smith on "Our Indians." In a fascinating group of articles under the head of "How I Served my Apprenticeship," Frank R. Stockton will tell how he became an author. General Nelson A. Miles will give reminiscences of his army experience; and Andrew Carnegie will recall his early days in getting a business footing.

The publishers of the *Youth's Companion* make the following offer to all who at once forward $1.75 and enroll themselves as subscribers for 1896, viz.: They will send free a handsome four-page calendar for 1896 (7 by 10 inches), lithographed in nine colors, the retail price of which is fifty cents; also the *Companion* will be sent for the remainder of 1895 free of charge, including the Thanksgiving, Christmas and New Year's double numbers.

MODERN MATERIA MEDICA. By Doctor Otto Roth. Revised by Doctor Gregor Smith, Würzburg. Cloth; 8vo; pp. 467. Price, $2.00. William Wood & Co., New York.

Modern Materia Medica was translated some years ago for Wood's Medical and Surgical Monographs, and proved so popular that the publishers were soon compelled to issue it in book form. This volume is a new translation of the seventh edition, recently published in Germany, and revised by Doctor Gregor Smith. It is brought fully up to date and includes the many new drugs which now form so important a part of the practicing physician's pharmacopœia. Moreover, it is replete with formulæ and prescriptions. The very clear and practical style in which it is written cannot fail to make it of the greatest assistance to either practitioner or student.

MODERN DEVELOPMENT OF HARVEY'S WORK. By T. Lauder Brunton, M.D., F.R.S. Cloth; 8vo; pp. 35. Macmillan & Company, London, England.

This is the annual "Harveian Oration," delivered before the Royal College of Physicians, October 18th, 1894. The title sufficiently explains its scope, which is extremely broad; it is a most interesting and scholarly address.

Therapeutic Brevities.

Use of Nitro-glycerin.—Bear in mind, above all other things, that Nitro-glycerin dilates the arterioles and lowers arterial pressure; more, it is a substance which probably has a powerful momentary stimulant influence on heart muscle. If, however, the line of the dose is passed in the slightest degree, the stimulant action passes immediately into one of immense depression. Kill an animal with Nitro-glycerin, and its heart will be found relaxed like a wet paper bag; kill with strophanthus or digitalis, and the heart is spasmodically contracted. Again, Nitro-glycerin, like prussic acid, acts only for a few minutes. The profession has been giving prussic acid for years three or four times a day; now it is a well known fact that if a man takes a fatal dose and survives fifteen minutes he almost invariably gets well; all symptoms are usually gone in twenty minutes. If a non-fatal dose is given it shows no influence in twenty minutes, hence how much influence remains two hours after a dose has been administered? It is very nearly so with Nitro-glycerin; therefore, if one employs this remedy at all, it should be in small doses with very short intervals; it is only useful as a momentary pick-me-up to the heart, in the crisis of the attack, and especially useful if the attack takes on the form of angina pectoris. How it acts we do not know—possibly it may be by relaxing spasm rather than by stimulating the heart.—H. C. Wood, in *Cleveland Medical Gazette.*

Diseases of the Middle Ear and Labyrinth.—Pilocarpine has been widely heralded as a remedy for affections of the ear. In two cases of dry middle-ear catarrh I gave subcutaneous injections thereof, but failed to induce the slightest improvement. In twenty-five other cases, injections of Pilocarpine were made directly into the tympanum, and with no better results. Subcutaneous injections were also employed in some cases of labyrinthine disease secondary to tympanic mischief, but in no case could beneficial action be determined. In two cases of recent implication of the labyrinth, however—one of traumatic effusion into, and the other a syphilitic affection of, the labyrinth,—distinct improvement was obtained. I conclude from these experiences that it is only in very recent affections of the labyrinth, whether syphilitic, traumatic, or secondary to tympanic inflammation, that any good can result from hypodermatic injections of Pilocarpine, and that the earlier the treatment is begun the more hopeful will be the issue; also that the drug is useless in old-standing affections of the labyrinth, and in chronic dry catarrh of the tympanum.—Doctor Schirmunsky, in *Monatsschrift für Ohrenheilkunde.*

Treatment of Uræmia.—Renaut endeavors to overcome the renal impermeability by application of leeches to the loins, which he deems preferable to wet-cupping.—In 1888 he demonstrated the anastomoses which exist between the subcutaneous blood-vessels of the loins and those of the cortex of the kidney. Inhalations of oxygen may be of use in aiding the blood to oxydize the retained toxic products. To increase the renal circulation the muscular substance of the heart must be stimulated, and for this purpose the administration every four days of one milligramme of crystallized digitalin is recommended, and that it be continued even after the renal obstruction has been removed. A milk diet, although it usually increases the daily amount of albumen secreted in the urine, is to be preferred on account of its diuretic action, and because it is a diet yielding very little toxic residue. During a uræmic attack, subcutaneous injections of ether act as a cardiac stimulant, and to some extent render the nervous system insensible to the action of the toxic agents.—*Indian Medical Record.*

Drugs Many; Remedies Few.—New drugs are added every day for the benefit chiefly of those who do not know how to employ the old ones.

Many men never set out to prove experimentally for themselves the value of any drug or drugs, and so they never come to a condition of mind in which they employ remedies with confidence, precision, and success.

It is the ruin of modern medicine that men do not use their minds and base their work on the immovable foundation of their own proved convictions.

The old which is tried and proved should be loyally preserved; well known drugs should be retained, and the new always, in every case, and by every individual, subjected to continuous and competent examination and proving.

The third-rate practitioner, who has not gained a just self-confidence by reason of thoroughness and success in practice, always "hankers" after the reputation of being thoroughly "up to date."—*The Hospital.*

The Mudar Plant and its Properties.—This plant is largely used by the natives of India. Five grains of the dried and pulverized root, given four times daily, and accompanied by a dose of castor oil on alternate days, is considered a specific in dysentery; the oil obtained by boiling equal parts of the dried root and mustard oil together for an hour, forms a valuable anodyne liniment for rheumatic and other pains; while the lesser roots are used as tooth brushes (*Miswaak*) for strengthening the teeth and gums and averting toothache. The leaves are heated on an iron pan and then tied on to affected parts to assuage pain. The flowers are used as a specific in fever. The milky juice that exudes from any part of the living plant when bruised, is useful in bringing boils to a head; it is employed both internally and externally in splenic fever and certain forms of eczema, and is recognized as a powerful remedy in toothache—indeed, it not only removes the pain, but appears to have the property of eradicating a loose tooth and of strengthening a firmly fixed one.—*Indian Medical Record.*

Absolute Alcohol in Erysipelas.—Langsdorff, of Baden Baden, claims to have had excellent results in thirty-two cases of erysipelas of the face and other parts of the body by treating with compresses saturated in absolute Alcohol; the painful tension of the skin disappeared in from one to two hours, and in the course of a day the temperature fell to normal. After eight to ten hours, marked swelling of the skin took place, especially about the centre of the inflamed area; new areas of the disease often appeared near the border of the original patch, which readily yielded, however, to renewed applications of Alcohol; desquamation followed after some days, at which time emollient applications were valuable. No complications, such as connective-tissue necrosis from the Alcohol, were observed. To prevent evaporation, the compresses must be covered with some impermeable material; and they should be changed every fifteen minutes until all inflammation has subsided, two to three days being generally required.—*Boston Medical and Surgical Journal.*

Cantharidin in Lupus.—Liebreich believes that a satisfactory remedy for lupus must be some agent that will not alone destroy bacilli, but as well have some effect upon the vital forces, his choice being Cantharidin. After presenting the peculiar action of the drug and showing that medicinal doses, even if continued for many months, will not give rise to pathological changes in the kidneys, he insists it does exert most beneficial effects upon general symptoms, and may be given internally as a sodium cantharidinate, the pure drug dissolved in tincture of orange-peel (1 to 5000), or by hypodermatic injection. From the results obtained, Liebreich concludes that the dogma that lupus vulgaris cannot be cured without cicatricial tissue is untrue, and he demonstrates that Cantharidin has a precise and definite curative action.—*Therapeutische Monatshefte.*

Cocaine in Whooping-Cough.—Wells and Carré have treated 300 cases of whooping-cough by internal administration of hydrochlorate of Cocaine in doses varying from one-sixteenth grain in infants of eight months to one-third grain in children of five or six years. These doses were given three times in the twenty-four hours. The treatment had a very favorable effect on the symptoms and course of the disease; vomiting was checked, appetite returned, attacks of cough diminished both in frequency and in intensity, sleep became less disturbed, and the duration of illness was markedly lessened. Complete relief resulted in from a fortnight to three weeks. Cocaine is generally well borne by children. The only disagreeable effect is occasionally looseness of bowels, which is an advantage rather than otherwise.—*British Medical Journal.*

Local Application of Carbolic Acid.—A diabetic male had an insignificant wound of the leg dressed with a compress soaked in a weak Carbolic acid solution; this induced gangrene, which increased in size daily. The patient went to an empiric who replaced the carbolic acid by an ointment of some sort, when gangrene was arrested. Another case, an alcoholic, had sclerosis and perforating ulcer of the left great toe, which was dressed with Carbolic solution, one to forty; on the second morning all the end of the toe was gangrenous. These cases show the dangers which may result from the local application of phenic acid, especially if made by the patient himself. Caution should always be exercised in the use of Carbolic dressing. The danger is greater when from any cause the tissues have less than their normal vitality.—*Normandie Médicale.*

Contusions and Lacerations of Urethra.—Make careful attempts to introduce a catheter, and if successful leave it in place for five or six days, irrigating the bladder daily with

boric acid solution; after that time the reintroduction, if necessary, will generally be easy:

When a catheter cannot be introduced, external urethrotomy may be performed; it should be done at the earliest possible time, so as to avoid the extravasation of urine and infection of the peri-urethral tissues:

If for any reason this latter measure is not available, supra-pubic puncture is a safe, efficient, and easily executed procedure for purposes of temporary or even permanent relief.—As a substitute for puncture, supra-pubic cystotomy may be resorted to.—Doctor Reineking, in *Milwaukee Medical Journal.*

Bleeding Hæmorrhoids.—Order complete rest in horizontal position; bathe region with cold boracic lotion. If pain is acute, apply an ointment of vaselin in each ounce of which are two grains of muriate cocaine, five grains extract belladonna, and seven and a half grains extract krameria. If hæmorrhage is severe, apply a solution of iron perchloride on cotton wool. Reduce hæmorrhoids with sponge soaked in cold water. In the evening introduce a suppository containing one-fifth grain of extract belladonna, one-half grain of extract opium, fifteen grains of extract krameria, and sixty grains of cacao butter. If hæmorrhoids continue to cause annoyance, surgical interference either by forced dilatation of the sphincter or by extirpation will be necessary.—*Practitioner* (London).

To Prevent Decay of Teeth.—A very satisfactory mouth-wash is composed of:

℞ Benzoic acid, 40 grains.
Thymol, 4 grains.
Salicylic acid, 20 grains.
Tincture of eucalyptus, 3 drachms.
Water, 25 ounces.

The mouth should be rinsed thoroughly with the solution for half a minute each evening. It is efficacious in preventing decomposition of food particles, and consequently caries of the teeth.—*Exchange.*

[We should think the application would be required at least twice or thrice daily. Further, Euthymol presents all the good features of the foregoing, and others as well, and is readily reduced to any strength desired.—Ed.]

Quinine in Chorea.—Recently, in the *Boston Medical and Surgical Journal*, were detailed eight cases of chorea treated with Quinine administered in doses of from six to eight grains daily; no other measures save hygienic were observed. In one case there was complete recovery in a week; in another, treatment was prolonged for ten weeks. In five cases, Quinine proving ineffectual, arsenic was substituted with benefit. With the exception of the case that recovered within a week, the results of Quinine were neither remarkable or satisfactory, consequently particular virtues in this malady cannot be attributed to this drug. The hypothesis that it acts by stimulating the inhibitory motor action of the spinal cord is not tenable.—*Archives of Pediatrics.*

Hygienic Influence of Forests.—In warm countries, when a forest is cleared away, fever always makes its appearance, while if, in insalubrious districts, trees are planted in quantity, sickness disappears. Thus the Roman campagna and the Tuscan marshes, where luxuriant forests are now growing, have almost lost their traditional unhealthfulness.

Another important hygienic factor of the forest is the fact that ozone exists in unusually large quantities in their neighborhood. This fact, lately established by Fernow, has been held by him to show that a forest constitutes an important barrier against the approach of epidemics and infectious diseases.—*Cosmos.*

New Method of Reducing Hernia.—Doctor Henry E. Stafford advises a method which is purely original. He takes an ordinary rubber bandage, two and a half inches wide and three yards long, and winds it about the scrotum (including the penis), commencing below the centre and drawing tighter at the lowest part, until all parts are covered; thus the bandage exerts a constant pressure. With each layer the bandage is drawn tighter, and usually before half of it is used up the bowel slips back and the hernia is reduced. This is not so painful as taxis, and is much more effective. The same method may be employed in reducing a prolapsed rectum.—*Maryland Medical Journal.*

On Ether Narcosis.—Most cases of bronchitis and broncho-pneumonia following the inhalation of ether are due to the nature and quality of the anæsthetic. It is an established fact that simple contact of air will cause a deterioration of the ether by the formation of certain products of oxydation which act as strong irritants of the respiratory mucous

membrane—an accident that may be avoided by keeping the ether in small containers in a cool place, and opening a fresh bottle for each operation. Any ether that is left over is always unfit for future purposes of inhalation, and can only be used externally. —*The Australasian Medical Gazette.*

Belladonna in Pertussis. — Prepare solid extract by reducing to one-eighth strength with glycerin, making a convenient form for dispensing. Reduce again to put into the hands of patients, to an eighth, by adding seven drachms of syrup to one of this solution of Belladonna. To a child of one year, begin by giving one drop three times a day for two days, then two drops three times a day for two days, and so on, constantly increasing until the whooping is overcome; then go back to the minimum dose, and continue at that until the cough is entirely broken.—*Medical Summary.*

Irrigation of the Bladder.—Doctor Baldy again calls attention to the great importance of this measure in all cystic troubles, either functional or otherwise, in women. A catheter, and small, hard-rubber funnel with rubber connection, is all the apparatus necessary. The general practitioner can daily irrigate the bladder of his female patients in his operating-chair without the slightest pain or inconvenience. The irrigator should be made aseptic, and the solution always used warm. Boric acid or potassium permanganate is amply sufficient.

Taka-Diastase in Infant Feeding. — This ferment, being a dry powder, tasteless, and of no perceptible odor, can be given in very small bulk, and for this reason will prove itself of value in infant feeding, where it is desirable to give starch-containing foods if such would easily dissolve and the infant's saliva could be relied upon to perform that function. The new diastase would appear to be the remedy for which we have waited so long.—*New Orleans Medical and Surgical Journal.*

Vesicarea in Gonorrhœa.—I have for several months treated gonorrhœa with tincture of Vesicarea, and it has been a great comfort to my patients to have their cases entirely relieved within a week, and very often in three days. I depended alone upon the Vesicarea, hence make no error in attributing success to it. A half-teaspoonful to a teaspoonful of the tincture three times a day will prove effectual in male or female.—Doctor Leo Bennett, in *Medical Times.*

Operation for Ptosis.—Doctor Max Peschel, operating on a case of paralytic ptosis accompanying total ophthalmoplegia, merely passed three slightly divergent threads beneath the skin, running on one side into the tarsal cartilage and on the other stopping in the eyebrow, so as to utilize the action of the frontal muscle. The threads were left in place twenty-four hours, and the effect was very satisfactory.—*Annales d'Oculistique.*

Pilocarpine in Alcoholism.—Doctor Josham recommends one-third grain doses of Pilocarpine hypodermatically, and declares "its sobering effects are remarkable;" sleep ensues, and the patient wakes up a perfectly rational being. "The tense, red, bloated countenance and bleared, congested eyes pass away, the features become calm and easy, the skin soft and clear."—*Provincial Medical Journal.*

Chronic Hæmorrhoids. — Simple diet and open-air exercise—avoid constipation, riding, and bicycling. Bathe anal region well with cold water after each action of the bowels. Take for a short period, at intervals, with lunch and dinner, two pills, each containing one grain of extract witch hazel, four grains of extract capsicum, and honey sufficient to make a mass.—*The Practitioner* (London).

Sanguinaria as an Emmenagogue.—In his "Dynamical Therapeutics" Professor H. T. Webster, who is known as a careful observer, remarks that Sanguinaria is apparently possessed of valuable emmenagogue and ecbolic properties; he claims to have found it very reliable in amenorrhœa, but not suitable for indiscriminate use.—*Western Druggist.*

Nuclein. — Nuclein therapy has come to stay. It is rational and scientific, and accomplishes all the good that can come from so-called antitoxin, and its use is not fraught with any of the dangers of this latter remedy. —*Hot Springs Medical Journal.*

Cold in the Head.—Gelsemium is the most potent drug known for the relief of this unpleasant condition. If taken early, drop doses of the fluid extract administered hourly usually secure most satisfactory results.—*Medical Summary.*

Medical Progress.

Ectopia Testis Perinealis.—Congenital perineal displacement of the testicle is a condition so rarely met with, that a recent case is of interest. Attention was called to a healthy baby a fortnight old, by its nurse, who stated that she had discovered a small tumor in its perineum that had not been noticed at birth. On examination, pressure with the finger discovered a small round lump lying midway between the scrotum and the anus, close to the raphe on the left side. The lump was deeply placed, and apparently occupied a sort of pouch, in which it was freely movable; it could be pushed up to the margin of the scrotum but not into it, being retained by a band of some sort, and on the removal of pressure it returned to its original position. The skin over it was perfectly smooth, and resembled in all respects that of the rest of the perineum. The scrotum, however, was noticed to be somewhat less rugous on the left side than on the right, and a little manipulation revealed the fact that the left testicle was absent. The right testicle was normal, and comparison showed an identity in size and consistence between it and the body in the perineum. Finally, the cord on the left side could be traced, somewhat indistinctly, into the scrotum. There was, therefore, no doubt that the perineal tumor was the testicle.

There is a general consensus of opinion that perineal ectopia is the most uncommon deviation of the testis from its normal site. Curling, in his classical work published in 1843, enumerates only three examples, but many others have been since published. Usually, as in the instance under notice, the deviation is on the left side, but in a case reported by J. Hutchinson it occurred on both sides, and in another (Vidal's, still more remarkable) two brothers were similarly affected. It is usually congenital, but in one instance occurred, without the intervention of traumatism, so late as the age of twenty-five years.

The exact causation is somewhat obscure, but it seems to be mainly due to an excessive development and abnormal persistence of those fibres of the gubernaculum testis which are attached to the tuber ischii and the sphincter ani, and which thus draw the testis further into the perineum than is usual. The band or adhesion, which is almost invariably described as having been met with in operations on these cases, appears to consist of the remains of this process of the gubernaculum.

In contrast to the abdominal or undescended testicle, the perineal variety is usually functionally active, and it has never been noticed to become the site of malignant disease.—E. Warren Clarke, in *Quarterly Medical Journal*.

Brains of the Sensitive Plant.—This, which is such a delicate house ornament with us, fairly enamels the earth in Ceylon, growing wild from Adam's Peak to Point de Galle, multiplying its dainty, bell-like pink blossoms, mingled with the delicate, feathery acacia. Growing so exposed and in weed-like abundance, it is natural to suppose that it would become hardened, as it were, to rough usage; but this is not so, as it retains all its native properties, in exaggerated form if possible. Our puny little hot-house specimens are not more delicate or sensitive to the human touch than is this Ceylon mimosa. It is the most impressible of all known plants, and is appropriately named. Curious experiments prove this. If a person will fix his eyes upon a special branch and slowly approach it, the plant is seen gradually to wilt and shrink within itself, as it were, before it is touched by the observer's hand. It is endowed with an inexplicable intelligence or instinct, and what appears to be a dread as regards rude contact with human beings. A few years since the writer was the guest of an English physician who was also a coffee-planter. While sitting with the family on the broad piazza which formed the front of the bungalow, a thrifty sensitive plant was recognized and made the subject of remark. The doctor called his daughter of eleven years from the house. "Lena," said he, "go and kiss the mimosa." The child did so, laughing gleefully, and came away. The plant gave no token of shrinking from contact with the pretty child! "Now," said our host, "will you touch the plant?" Rising to do so, I approached it with one hand extended, and before it had come fairly in contact the nearest spray and leaves wilted visibly. "The plant knows the child," said the doctor, "but you are a stranger." It was a puzzling experience, which seemed to endow the mimosa with intelligence.—*The Eclectic Magazine*.

Kala Azar.—*The Englishman*, of Calcutta, in a recent issue called attention to the increasing prevalence in Assam of a disease known as kala azar. At first regarded as a manifestation of malaria, then as a

form of beri-beri, it is now declared to be something quite different from these and a malady altogether peculiar to the district. It is described as decimating the population in many parts and leaving "behind it a perfect trail of desolation." We are informed that whereas in 1891 the total mortality from all causes amounted to 9114, it had risen in 1893 to 14,430, an increase apparently accounted for by the 5107 deaths from kala azar. The returns for 1894 have not been published, but it is anticipated that when they come out they will show a still further increase. In many tea gardens, notwithstanding the great efforts made to maintain good sanitary conditions, kala azar has carried off the coolies in large numbers; and at least five deaths have occurred at Nowgong from this cause in the European community. The malady is thus very fatal, and does not appear to be amenable to treatment; it surely claims its victims in from three to eighteen months.

An attack is ushered in with continued fever, a very high temperature persisting usually for a fortnight or more, subsiding to recur at frequent intervals. Both spleen and liver undergo enlargement; diarrhœa and dysentery are frequent complications, dropsy is occasionally met with, and œdema of face and extremities is frequent. Anæmia is usually absent at the commencement of the attack, but becomes more or less pronounced as the case progresses. Extreme emaciation often accompanies the termination of the case, but the appetite, as a rule, remains good for many weeks during the progress of the disease, notwithstanding that the patient is unable to digest his food; and it is curious that, although the thermometer may register three or four degrees above normal, the patient thinks he has no fever; it is still more curious that the usual anti-malarial remedies seem to have absolutely no effect.

An influential meeting of the medical men of the affected districts, summoned by the Sanitary Commissioner, has decided it is "absolutely imperative that an expert should be appointed to inquire into the pathology and cause of the disease."—*British Medical Journal.*

A Possible Fallacy in Testing Urine for Sugar.—When a patient is taking medicinal doses of sulphonal it is always possible, by boiling the urine with Fehling's solution for a short time, to obtain a well marked precipitate of a yellow color—namely, oxide of copper,—which, in the absence of proper precautions, is apt to lead to erroneous conclusions. The same samples of urine, examined by the polari-saccharimeter with monochromatic light (yellow sodium flame), will fail to give the deviation to the right which is characteristic of diabetic sugar—indeed, give the slightest appreciable deviation to the left.

The reduction of Fehling's solution in this instance is not due to a product of transformation of sulphonal in the animal economy, for the addition of a medicinal dose of sulphonal to urine absolutely free from sugar will produce exactly the same reduction.—*Glasgow Medical Journal.*

Emigration of Intestinal Worms during Fevers.—Intestinal worms, particularly ascarides, if placed in water of 45° to 68° F., become stiff, curved, or coiled up, and insensitive to external stimuli. If then the temperature be elevated to 98.6° they begin to present slight movements, and if it be increased to 102°, 104° or 106° they become lively and energetic so that their motions seem to be rather a discharge of energy. These movements, though chiefly due to the high temperature, might also be aided by certain morbid processes, as typhoid fever, etc. This increased activity may cause them to traverse intestinal ulcers or to pass into abscesses and thence be evacuated. A worm will not penetrate normal intestinal wall, but if an opening present it will pass through. — Doctor Demateis, in *Gazzetta Medica di Torino.*

Height of the Fundus during the Stages of Labor.—Fothergill measured the breadth and length of the uterus, and the distance from the fundus uteri to the upper margin of the pubic joint, during the various stages of labor. The fundus rises three-tenths of an inch before labor ends, while the measurement from the fundus to the pubes lessens one inch before birth. The length of the parturient canal is not shortened before delivery; as the child passes through the uterus into the vagina the womb grows narrow, while as labor advances the uterus is contracted antero-posteriorly. The cubic contents of the uterus are lessened. The fundus does not sink before the birth of the head.—*Edinburgh Medical Journal.*

Cerebral Uræmia.—Two factors are to be considered: one an undoubted and dominating toxic element, due to faulty elimination with diseased kidney; the other, cerebral œdema, the localization of which in the motor zones may give rise to convulsions,

either general or limited to one side, to one member, or even to several muscles of the face. In some cases the uræmia assumes an apoplectic form, while in others it is hemiplegic, both depending upon cerebral œdema. It is probable in many instances hemiplegia arising from uræmia is attributed to hæmorrhage or softening.—RENDU, in *Journal de Médecine et de Chirurgie Pratiques.*

EXOPHTHALMIC GOITRE.—Copenhagen believes this disease is of more frequent occurrence than is commonly imagined, since generally diagnosis rests upon the three well known classical symptoms that are present only when the malady is well advanced. Early or abortive cases, he holds, are readily relieved. He further remarks the origin of the affection is in hypertrophic processes set up in the thyroid gland—the pathological antithesis of myxœdema—that often, in women, are correlated with uterine affections, especially during first pregnancy; nervous shock is also a frequent cause.—*Hospitals-Tidende.*

CATARACT OPERATIONS ON ANIMALS.—Although cataract is not uncommon in the lower animals, operations for its successful removal are rarely reported. Cunier reports that both he and Brogniez (a veterinary surgeon) have done successful operations upon horses and other lower animals. Randolph operated on a young pointer dog entirely blind from cataracts, by discission in both eyes. In three weeks the pupils were entirely cleared and sight was fully restored. The dog was taken on a hunt, and proved as efficient as ever.—*Annales d'Oculistique.*

COMBINATION OF TUBERCLE AND CANCER.—There were noted the following combinations: Cancer of the jaw, with tuberculosis of the cervical glands: Cancer of the mamma, with tuberculosis of the axillary glands of the same side: Cancer of the stomach, with large caseous masses in the liver, tuberculosis of the peri-portal and axillary lymphatic glands: Endothelioma of the parotid, in which there was extensive tubercular infiltration all around the lower jaw.—*Virchow's Archiv.*

ABSORPTION BY THE RECTUM.—Posner has made some observations showing the rapidity of absorption of certain substances by the rectum. Certain solutions, like indigo-carmine, methylene blue, etc., injected into the rectum, appear within fifteen minutes in the bile and urine; other substances, such as β-naphthol-green, are not absorbed at all. The experiments confirm earlier observations as to the importance of the rectum in absorbing remedies or poisons, and have led Von Noorden to recommend anew the use of quinine suppositories in whooping-cough.—*American Journal of the Medical Sciences.*

BILE IN URINE.—Agitate with a few drops of chloroform, in a test tube, a portion of the suspected urine. If bile is present, the chloroform becomes turbid and acquires a yellowish hue, the depth of which is in proportion to the amount of bile present. If no bile, the chloroform remains limpid.—*Medical Chronicle.*

[This is an old test, but not trustworthy where the patient indulges in curries.—ED.]

INFLUENCE OF CLIMATE ON MENSTRUATION.—From a careful study, based upon over three thousand patients between the ages of ten and nineteen years, I have arrived at the conclusion that the reason why girls in tropical countries menstruate at a relatively earlier age than Europeans is not the influence of the climate, but of too early sexual excitement.—JOUBERT, in *Indian Medical Gazette.*

INFANT FEEDING.—In France this is regulated by very strict laws. A severe penalty is incurred by any one giving infants under one year any form of solid food unless such be ordered by a written prescription signed by a physician. Nurses are also forbidden to use nursing-bottles provided with rubber tubes in the feeding of infants.—*Exchange.*

PROSTATIC DISEASE.—About the earliest symptom of prostatic disease is an increased frequency of urination, especially at night. This very often precedes any enlargement that can be discovered either by rectal examination or by the use of the catheter.—*Pacific Record of Medicine.*

THE SPINAL CORD.—Irritation of the spinal cord increases secretion. Congestion of the lumbar plexus or of the cord will cause diabetes; a little lower down, diarrhœa. Congestion of the cervical plexus causes vomiting and palpitation.

The Medical Age.

Vol. XIII. DETROIT, NOVEMBER 25th, 1895. No. 22.

Original Articles.

COLLES' FRACTURE.

BY DOCTOR C. M. STOCKWELL.

While making no claim to originality of investigation or methods of treatment, so deeply am I impressed with the importance of a correct comprehension of the true character of this lesion and of the unfortunate results that usually follow, that I am led to present a brief synopsis of the literature covering the subject, along with the results of personal experience both in the usually accepted and a later method of treatment.

It will, I doubt not, be conceded that no injury is so frequently met with that to the surgeon gives such unsatisfactory results: this is due in some measure to an incorrect ætiology. In no other fracture is there such marked tendency to stiffness of the joint and infiltration. In fact, it is not a fracture simply, but a combined or rather conjoined fracture and dislocation—a fracture of the lower end of the radius, and dislocation of the ulnar-carpal articulation, with laceration of the investing and connecting ligaments. These last—the lacerations,—generally unrecognized, are a source of great irritation and necessarily lead to synovial inflammation, effusion, and lymph deposits, that induce great suffering and ultimately permanent deformity, to say nothing of the many instances in which they give rise to troublesome and unsatisfactory litigation. Text-books not alone fail to impress upon the student these facts, but for the most part sedulously ignore them.

Frank Hastings Hamilton, though he recognizes these possibilities as suggested by other writers, fails to appreciate their true import, and claims such conjoined dislocations and lacerations can only occur in cases that are produced by exceptionally severely applied force, predicating his opinion upon the fact that force, as applied to the cadaver in his experiments, failed to produce any such compound injury. Following Nélaton's suggestion and the actual experiments of Pilcher, he attempted the production of Colles' lesion upon the cadaver, by the following method: Extreme extension of the hand upon the arm, with the palm of the hand fixed upon a firm unyielding surface, when, by severe blows upon the sawn-off upper ends of the radius and ulna, fracture of the former was effected without the complication of dislocation of the latter or tearing of carpal ligaments. Considering Hamilton's boasted familiarity with mechanical laws and their relations to the lines of force, it is indeed amazing that he failed to recognize the vast difference between the terms of this experiment and the actual conditions attending a case of Colles' fracture in the living subject. And when his experiments are compared with those of Edwin M. Moore, or even with those of Lewis Pilcher, they appear still more faulty, revealing an utter lack of knowledge of the mechanico-anatomical relations of not alone the radius and ulna, but also of the wrist and hand. He gratuitously assumes the lesion is the result of the radius being caught between two counter forces and giving way at its weakest point.

In the experiments of Doctor Moore—subsequently verified by Pilcher and Jacobson—the arm of the cadaver was bound flat upon a table-top, its anterior surface downward, and a flat lever fastened to the palm whereby the hand was forcibly extended—that is, bent back upon the arm—until fracture of the radius followed, which result invariably induced displacement of the ulna and tearing of the ligaments, both duly announced by a distinct snap and sudden relief of tension. This experiment in its *modus operandi* is as nearly as possible consonant with the applied

force that induces Colles' fracture, and was so recognized by Dupuytren as long ago as 1820. It is a recognition, moreover, of the fact that there is another factor aside from mere force in the line of the shaft of the radius, viz., extension of the hand at the carpo-radial and carpo-ulnar articulation. And here it may be appropriate to remark there is a third prime factor in the production of this lesion, of which no account can be taken in any experiment or series of experiments, and which is *the force compounded by the weight of the body and the velocity of the fall.* Hamilton's contention regarding the force being exercised upon the radius alone, which consequently gives way at its weakest point, is untenable, for in Colles' fracture the force of impaction is to a great extent broken ere it reaches this bone; again, the lower end of the radius is especially devised and fitted for receiving and breaking shock when applied in the direction of its long axis.

Before proceeding further, it may be pertinent to inquire what constitutes the lesion that bears the name of Abraham Colles, who taught surgery in Dublin more than eighty years ago. Hamilton insists it is a fracture of the radius one-fourth to three-fourths of an inch from its carpal articulation; but Mr. Colles distinctly defines it as occurring two inches from the latter point. In these days, however, the title by extension is made to do duty for fracture at any and all points between these two extremes, induced by impaction through the wrist and hand, whereby is produced the well known "silver fork" deformity.—Barton's fracture, which consists merely of a chipping-off of the posterior margin of the lower end of the bone, is consequently excluded. In other words, in spite of the conflicting expressions, Colles' lesion is a fracture of the lower end of the radius, complicated by dislocation of the head of the ulna and tearing of the investing ligaments. This point being conceded, it is readily understood why the classical methods of treatment are so unsatisfactory; for in the added lesion of dislocated ulna and torn ligaments is found an injury of the synovial surfaces that in other instances—found in other parts of the body—teach us to expect serious inflammation and disintegrating action. If measures are not adopted that will with certainty place these surfaces in normal condition, relieve irritation, and afford complete rest, unfavorable or even pernicious results must in all reason be expected.

In 1869 Doctor Edwin M. Moore, while serving as Surgeon to St. Mary's Hospital, Rochester, New York, had charge of a woman who in a paroxysm of insanity threw herself from a third-story window, receiving so severe an injury of the spine as to cause death in less than thirty minutes. It was also observed that she had suffered fracture of both forearms—double Colles' fracture. Post-mortem examination of the right arm revealed the characteristic deformity, and further evidence was afforded by the fact that no crepitus resulted on rotation of hand. No impaction was apparent, but the lower fragment of the radius was found to ride the back of the upper; the ulna was also discovered to have been carried well downward and outward from the axis of the forearm. Having, as he supposed, pressed the fragments into place, Moore was surprised to find a resistance which seemed like muscular action. This being manifestly impossible, the cause was sought for "by repeating the effort to replace the broken fragment, with the result of recurrence of resistance, with an elastic rebound." Finally solution of the mystery was found in the peculiar position of the ulna, its luxation and ligamentous entanglement. The head of the ulna, though having no bony articulation, nevertheless does articulate with the triangular fibro-cartilage, which serves the purposes of a ligament and is attached to the pit at the base of the styloid process upon which it rotates, and is itself covered with cartilage provided with synovial membrane.

The annular ligament, being a portion of the fascia of the forearm, furnishes grooves through which the tendons of the extensor muscles pass; the posterior portion passing across over the head of the ulna is attached to the pisiform and cuneiform bones, while the anterior passes from the end and inner surface of the styloid process to the cuneiform. The ulnar extensor runs in one of the sheaths of this fascia before described, and takes a course between the styloid process and the bone upon the back or side of the forearm, and thereby furnishes no small

amount of support. The rebound—described by Moore as seeming at first like muscular action—was found to be due to the fact that a projection of the styloid process had been caught in the fibres of the annular ligament, by which the ulna was prevented from rising and the wrist forced back. Every ordinary method of replacing these bones was resorted to by Doctor Moore in this case. "The orthodox plan of bending the hand toward the ulnar border of the forearm only resulted in tightening the annular band on the styloid hook, folding it upon itself, and no pressure on the anterior surface of the ulna could cause its liberation, but on the contrary insured its retention with greater certainty." "An incision through the annular ligament," Doctor Moore continues, "revealed the nature of the separation. The internal lateral ligament was torn away from its attachment to the styloid by separation of the scale of compact bony tissue comprising the head of the process and its inner surface, thus leaving the styloid as a rough, ragged hook to hold the annular ligament. The attachment of the triangular fibro-cartilage to the styloid was also torn off, but the rent was through the cartilage, leaving a few tags in the pit."

It is this complete severance of a ligamentous restraint which permits the ulna to bulge outward and downward; and when the hand is carried backward and upward the styloid hook is moved forward and held at the pisiform bone by the annular ligament. If the ulnar extension, however, is carried toward the radial side, thereby the ulna is freed from the restraint of the annular ligament, and its head is moved toward the radius and through the rent in the fibro-cartilage resting against the wrist-joint, thus holding the hand out at full length, keeping the fractured ends of the radius in apposition, and furnishing the best of all splints—an entirely parallel bone in its place. The absence of crepitus may be explained by the fact that the fractured surfaces of the radius are not in contact—the lower fragment being carried up and onto the surface of the upper fragment.

Moore's examination of the left arm in the case under consideration revealed an oblique fracture one-fourth of an inch on the palmar surface and three-fourths of an inch on the back, inclining toward the ulna. The position of the ulna was the same as in the right arm, only that a little more of the bony tissue of the styloid was torn away. The annular ligament was folded into a similar cord, causing a rebound whenever an attempt was made to carry the lower fragment of the radius into its normal place.—The only point of difference in the two fractures was in the exact line of the fracture—a difference which does not, apparently, in the least bear upon the question of reduction, or retention after reduction.

Here I may mention the fact that Sir Astley Cooper, though he wrote at a time before this

Fig. 1.—Colles' fracture—radial view.*

peculiar lesion had received the baptismal title derived from the eminent Dublin surgeon, appears to have almost stumbled upon its real ætiology; but never having had the privilege of post-mortem dissection, he was led astray by supposing the pronator quadratus muscle to be the adverse power. He assumed that fracture of the radius close to the wrist-joint entails dislocation of the ulna, and adds that "one must be very careful in its treatment in order to prevent the injury leading to permanent loss of the use of the fingers; for so soon as the injury happens, the pronator quadratus draws the fractured

* The illustrations of this article are from the Transactions of the N. Y. State Medical Society for 1870.—Ed.

end of the bone obliquely across the forearm amidst the flexor tendons." He recognizes also that if the fracture and dislocation be properly reduced, the weight of the hand alone will hold the parts in apposition, for he expressly mentions this fact,* which is a

FIG. 2.—Colles' fracture—ulnar view.

point made by Doctor Moore, as will be seen later on.

In attempting to prove that the fracture of the radius is the chief or only lesion, both Hamilton and Dennis — the last our latest author — mention the foregoing case of Moore's as one of exceptional severity, due to the great height from which the victim had fallen; yet Hamilton later admits the deformity of the lesion in question is due in a large majority of instances to a relaxation, stretching, or more or less disruption, of the anterior and posterior radio-ulnar ligaments, the triangular fibro-cartilage, and the internal lateral ligaments, "to which," he says, "I feel satisfied we must add the influence of strong, unbroken and oblique fasciculæ of the anterior carpal ligament." To this—without cognizance of any effect which injury of synovial membrane may have in the restoration of the integrity of the arm and hand—he attributes the deformity, which he also says "may be expected in a certain number of cases to continue, however exact and perfect may be the bony union." Indeed, though claiming that in his "own practice, deformity after this fracture is the exception," he declares when giving prognosis that "in a pretty large proportion of cases occurring in the practice of surgeons whose patients have been brought under my notice, some slight or considerable deformity remains."

In order more fully to comprehend the peculiar character of this fracture, it may be well to consider for a moment the manner in which the injury is received:

In whatever direction the body is inclined to fall, the hands are instinctively thrust out in such a manner that the first impact with earth—or whatever may be the object fallen upon—is upon the ball of the thumb, the hand being more or less rotated inward; hence the first brunt of the blow as communicated to the radius is upon its outer border, and the second—after or during process of fracture—is caused by rotation upon the ulna and its investing and attached ligaments. Therefore, whether the force be severe or otherwise, providing it be sufficient to induce fracture of the radius, it is equally likely to disrupt ulnar or carpal ligaments. If this complication does not occur, why should this be considered more than a simple fracture and prove unamenable to such general treatment as is accorded to any other fractures of long bones? Why is it that good results are not even expected?

Doctor Lewis S. Pilcher, of Brooklyn, N. Y., in a paper read May 16th, 1878, before the New York Academy of Medicine, claims that the distinctive feature of this fracture is the tearing up of the periosteum—reinforced by fasciculi of the anterior ligament at or about that portion of the bone which is usually involved in this fracture—that so firmly holds the broken fragments in their changed condition as to require great force and careful manipulation to restore to normal. He, however, admits the contention of Doctor Moore, that once restored to normal condition the fractured fragments are retained with very little difficulty and without resort to formidable splint machinery.

Having now endeavored to practically portray in some measure the varied influences that conspire to complicate this lesion, and that so frequently entail unfortunate results, I may

*Cooper upon Dislocation and Fractures.

pass on to the varied methods of treatment suggested.

Reduction of this fracture receives very little attention from most writers, but an unlimited variety of splints to retain the fractured fragments in place are suggested. Nearly all advocate extension—some severe, others moderate,—with manipulation of the fragments by the fingers for the purpose of forcing them into apposition; and it is generally deemed necessary to hold the parts firmly as replaced, until splints are fixed upon the arm, which latter are advised to be firmly held until fastened securely by bands or roller; also the splints are required to be so padded as to press upon the bones or portions of bones that before reduction were most prominent.

Druitt, in directing treatment, offers the following advice: "The elbow being bent and steadied, the hand should be clasped and powerfully extended, and at the same time be somewhat adducted." Long splints, longer than the arm, and well padded, are to be employed, but should, he thinks, be removed after three weeks in order to permit passive motion.

Gross, in speaking of reduction, says: "Having encircled the thumb and each finger with a narrow bandage, the better to control the resulting swelling, and the fracture having been adjusted by pressure and extension, a roller is next passed around the limb as high up as the superior part of the forearm." He then advocates application of the Bond splint.

Erichsen recommends "forcible extension and counter-extension with a view of disentangling the fragments and removing the dorsal prominence, and the application of a pistol-shaped wooden splint along the outside of the arm, reaching from the elbow to the extremity of the fingers."

Hamilton gives no method of reduction, but enters largely upon the description and application of a great variety of splints, commending most that of Hewett, which is provided with a movable hand-piece that permits flexion and extension of the hand without disturbance of the splint itself. His second preference appears to be a combination of short splints applied both anteriorly and posteriorly, but extending only to the carpus, permitting slight movement of the carpal joint. He attempts a description of Moore's method, but comes very far short of making it comprehensible—indeed, gives conclusive evidence that he does not himself understand it. He then declares that "reduction is to be accomplished by extension and partial circumduction, the hand being grasped firmly and extended first to the radial side, and finally forwards or in position of flexion."—Evidently he had no personal knowledge of the manipulation, or comprehension of the mechanical forces necessary to be overcome in order to secure reduction.

Thomas Bryant makes no mention of methods of reduction, but contents himself with recommending the use of well padded splints extending down to the fingers and firmly fixed by strapping, broad bands, or a roller bandage. "The elbow," he says, "should be bent at right-angles, and the hand held midway between pronation and supination." After three weeks he would remove the splints and give freedom to the hand. He adds: "The wrist-joint rarely ever recovers its normal movements after this form of fracture. Such deformity permanently remains, of which fact the patient should be warned."

Dennis assures us that reduction is to be made by the surgeon "grasping the hand of the patient as if to shake hands, and then making forcible, continuous and gradual extension so as to disengage the impaction and bring the lower fragment into apposition with the other." Fixation is to be maintained by splints, of which he mentions several different forms, giving preference to those so short as to reach only to the wrist.

David W. Cheever, who certainly is the peer of any living surgeon, is by no means so sanguine as some of his contemporaries. He considers the fracture one of the most difficult to treat and get a perfect result; the most careful treatment, he says, will not insure against subsequent deformity. He admits that one of the causes of imperfect restoration is that "the radio-ulnar ligaments, and also the lateral ligaments of the wrist-joint, are ruptured or stretched and strained at the time of the fracture so that the hand is partially dislocated at the wrist." With careful treatment, however, he thinks "a *fair* hand may be had in a majority of in-

stances, a perfect one in some few cases; a very imperfect one, according to surgical authorities, in other cases, in spite of any treatment."

Here may be added that some recent surgical writers recommend the fixation of the forearm and hand, as far as the metacarpo-phalangeal articulation, in a plaster-of-Paris bandage—a line of treatment also universally recommended by German and French authors; hence one is not surprised to learn from both these sources that the "resulting deformity is often extreme, and ulceration, phlegmon and gangrene of the soft parts frequent."

Bardenheur, dissatisfied with the plaster-of-Paris treatment, presents the astonishing alternative of confining the patient in bed, placing the hand and forearm on a support with an upward incline, the former projecting upon the splint, and attached to a cord "which is carried under a pulley fixed to the bottom of the foot-board of the bed, then brought up over a second pulley at the top of the foot-board, the distal end being attached to a weight; the extension is controlled in such direction," the author says, "as to overcome the existing deformity." This contrivance, fairly mediæval in ingenuity and inquisitorial in its fiendishness, like a deal of modern German pathology bears the ear-marks of a ponderous, clumsy theory that has never had practical elucidation.

Moore's method, which commends itself as being both clear and rational, is likewise based upon the mechanism of the parts, and changes induced by production of the lesions as found by him in the dissections before alluded to. This is best given in detail as nearly as possible in his own words. He says:

The patient may be anæsthetized or not. An assistant holding the forearm of the patient, the surgeon grasps the hand of the latter, the left with the right, and *vice versa*. If now the other hand be placed under the forearm above the point of fracture, the operator is enabled to bring the thumb over the back of the ulna, when the fingers are made to embrace the radius. Traction is first made by extension; then draw the hand laterally to the radial side, then backward; now while holding backward, and while making extension, it is swung toward the ulnar side, bending well laterally, when the extension of the hand is changed for flexion —thus the act of circumduction describes nearly a semi-circle. The position of the hand grasping the forearm undergoes constant change, as it is the antagonist of the other hand in everything but the extension. As the backward position of the hand, when it is carried to the extreme ulnar side, is changed to flexion, the thumb of the surgeon rolls around the border of the ulna, and is below when the manœuvre is completed. The test of the reduction is to be found by the presence of the head of the ulna on the radial side of the extensor.

The head of the ulna rests mediately, through the triangular fibro-cartilage, on the cuneiform bone, and is restrained from going backward by the annular ligament, holding on each side the tendons of the *extensor minimi digiti* and the *extensor carpi ulnaris*, thus making a concavity corresponding in form to a socket. When it is pressed into its pocket, and the hand flexed so that the head is supported by the wrist, the position of the hand is also restored in its relation to the radius. As a result of the displacement of the ulna, the ulnar extensor is carried from its place above the styloid process to the opposite side of the ulna in an extreme displacement, though sometimes it remains above its centre—and it is this latter form of lesion wherein classical modes of treatment may secure some measure of success. To disentangle the styloid and swing the tendon of the ulnar extensor over into its place is the purpose of the manœuvre just described. The hand is drawn toward the radius to pull off, by stretching, the annular ligament.

The backward motion, accompanied by extension, renders the ulnar extensor tense, which serves to draw the annular ligament backward — this is effected by pressing the thumb upon the ulna. The circumduction carries the tendon over the side. The fact that this injury entails a luxation as well as a fracture is further proved by the circumstance that the restoration is accompanied with a snap both tangible and audible.

When the manœuvres described have been completed, as before remarked, the hand is flexed and the thumb of the operator rests on the under side of the ulna. The head of the latter appears on the back of the wrist, and corresponds in position and contour to its fellow of the opposite wrist, excepting always such swelling as may arise from effusion.

As in the treatment of any other luxation, effort at reduction should not be abandoned until the deformity is entirely removed and the operator is assured that the ulnar extensor is in its place—a fact that can be easily determined.

The dressing proposed is intended merely to hold the head of the ulna in its fascial socket, utilizing the weight of the hand to keep the luxation of the ulna reduced.—If the thumb of the operator is kept under the ulna after the reduction, it will quickly be discovered that the weight of the hand is sufficient to retain it in place.

FIG. 3.—Colles' fracture after reduction by Moore's method—pad *in situ*.

As a substitute for the thumb, very little dressing is required, merely a cylindrical compress two inches in length and about half an inch in diameter—in fact, a single-headed roller bandage—which is placed under the ulna from the pisiform bone upward; this compress must also rest on the radial border against the tendon of the *flexor carpi ulnaris*. A band of adhesive plaster, of the same width as the bandage roll, and passing over the latter, is now wrapped firmly around the wrist, being made to extend downward to the extreme point of the radius, thus clasping the bones neatly and tightly. Note that, reduction having been accomplished, Nature has provided the best possible splint. The ulna lying beside the radius prevents displacement of the fractured end of the bone, and all that is required is to replace and secure this splint in its natural position.

There is no pain in the after-treatment, and such freedom from pain is evidence of complete reduction; if pain persists after treatment of Colles' fracture, the reduction is certain to be incomplete. After three or four weeks the dressing may be removed and the patient is in position to use with perfect freedom the injured extremity the same as prior to the accident. There is no occasion for inducing immobilization of hand or wrist, which only results in stiffness from non-use. When once the fracture is completely reduced, displacement cannot again be reproduced by any ordinary movement; and the

FIG. 4.—Colles' fracture—pad in place, and adhesive strip applied.

pad and adhesive strap, assisted by the position of the hand, secure all that can be desired.

I may here lay especial emphasis upon the fact that the ordinary rule of loose dressing on the first visit to a fracture of this class is a grave error. The first aim and purpose of the surgeon is to bring all the parts into immediate close relation. The plaster dressing gives slightly; the compress is by no means rigid; hence both, having a tendency to yield, are unlikely to produce serious constriction of the blood-vessels, and swelling consequent thereupon; the patient may, however, be given permission to split the adhesive plaster on the dorsal surface of the wrist in about six hours if swelling demands; and it is perhaps advisable for the operator to do this

himself soon after the dressing is applied. Comfort and invariably satisfactory results are best insured by placing the arm in a semi-flexed position in a narrow sling, the hand

FIG. 5.—Colles' fracture, fully dressed.

being prone and allowed to overhang, when by its own weight it secures the ulna in proper position—that is to say, the sling supports the wrist through the compress, the wrist resting on the ulnar side; and yet this is not essential except when the swelling is considerable, which rarely persists more than a few days.

Regarding passive motion, upon which considerable stress appears always to be laid—this, as already intimated, is self-insured, since perfect freedom is accorded to the hand and its controlling muscles; consequently there is no tendency to anchylosis or adhesion of the tendons to their sheaths, results which produce the deformity most frequently met with and apprehended after this injury. While writers with great unanimity advise early resort to passive force, they one and all appear to ignore a fact which experience readily teaches—that early forcible passive motion aggravates synovial irritation, and in cases of advanced age especially tends to the perpetuation of the deformity which it is desired to avoid.

During an active and somewhat diversified professional career of more than forty years, it has been my fortune to encounter a considerable number of cases of Colles' fracture, and in varied ages and conditions of life, and likewise to observe numbers under the care of immediate professional friends. During the first half of this period the results were more or less unsatisfactory, according to the degree of the lesion, and ranged from partial anchylosis to wasting and loss of muscular power in the forearm with adhesions of tendons to their investing sheaths. The methods of treatment, too, were widely varied; every form of splint was carefully and hopefully tried, but with no accession of better results. But with a knowledge of anatomical changes and methods of adjustment, as suggested by Doctor Moore, and so fully attested in his autopsies—admirably explained in his paper before the New York Medical Society in 1870—success has not only been invariable, but most flattering. It is with no little degree of pride, therefore, that I am able to assert the results during the last half of my professional career have been doubly satisfactory—satisfactory to the operator in relieving him of all fears as to the litigation that is so frequent a sequel to treatment of this lesion (said to occur in about eighty per cent. of cases); satisfactory to the patient in that he is saved all suffering, and obtains a perfect wrist. By following this method of treatment, Colles' fracture is no longer a *bête noire;* and yet to-day one is continually brought in contact with deformities resultant upon this lesion, and so invariably as to lead to the belief that when authors admit, as they all do, that successful results as a rule are only partial, this utterance is but a half-truth, and arises from the pride which disinclines every man to admit that any procedure on his part is always a failure; and I believe it would not be saying too much if I were to add that a large number of the admitted partial failures are in fact total failures. Indeed, no less an authority than the late Henry Bigelow of Boston, who was admittedly without a superior on this continent in the domain of surgery, was wont to admit that Colles' fracture, when complete, under the old orthodox methods of treatment resulted invariably in more or less deformity.

Walkerville, Ontario.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.*

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S ARMY.

(*Continued from page 656.*)

RESUMÉ OF THE SANITARY ORGANIZATION OF THE BRITISH ARMY.†

The officers of the Army Medical Staff comprise one Director-General (who is a surgeon-major-general with a special rate of pay), ten surgeon-major-generals, twenty-four surgeon-colonels, and fifty brigade-surgeon-lieutenant-colonels. There is no fixed establishment for the remaining ranks of medical officers, whose titles are surgeon-major, surgeon-captain, and surgeon-lieutenant. In 1893 these grades numbered 803 officers, counting three with the Army headquarters staff. There are also generally a number of surgeon-lieutenants‡ on probation (twelve in 1893), two apothecaries who rank with captains, and thirty-five quartermasters who are store keepers and accountants and have the rank of captain or lieutenant.

The Director-General is a member of the headquarters staff of the Army, and is, under the commander-in-chief, the responsible head of the department; he is charged with the administration and command of the army medical staff and medical staff corps; also of the militia medical staff and corps, the militia reserve of the medical staff corps, and the medical establishments of the Army, including the Army medical reserve of officers, besides the volunteer medical staff and corps, and the nursing service.

The surgeon-major-generals and surgeon-colonels act as principal medical officers in charge of the medical administration of districts and commands. There is at present one surgeon-major-general in the office of the Director-General. Of the other nine, six are serving at home and three in India.

In certain small districts brigade-surgeon-lieutenant-colonels have charge as senior medical officers.

The remaining medical officers perform the executive duties at all stations at home or abroad.

Hospitals.—The system of hospitals includes: General hospitals, station hospitals, hospitals on board ship, lunatic hospitals, and hospitals for women and children. Of these the only ones that require special notice in this connection are the station or garrison hospitals and the hospitals for women and children.

Station hospitals are commanded by medical officers appointed by the Director-General, usually a surgeon-lieutenant-colonel or surgeon-major, subject to the general officer or other officer in command of the troops at the station. An establishment of officers of the medical staff, and warrant officers, non-commissioned officers and men of the medical staff corps, is provided for each hospital according to its requirements.

Hospitals for soldiers' wives and children are administered as station hospitals. They are only partially supported by the government, deriving part of their funds, etc., from philanthropic societies and funds raised by voluntary contributions.

Hospitals for wives and children of soldiers are provided with a staff of female attendants. Orderlies or messengers for these hospitals are detailed from the troops on duty at the station.

The Medical Staff Corps.—The establishment of this corps provided for in the last army estimates was thirty-eight warrant officers, 342 staff-sergeants and sergeants, 287 corporals, nine buglers, and 1788 privates; total, 2464. This force is organized in companies, of which one is posted to each district, and with its corresponding company of volunteer medical staff corps attached. The Medical Staff Corps goes on foreign service, though not to India as yet. The last "Annual Return of the British Army" gives twenty-one of these companies. The warrant and non-commissioned officers and men of the Medical Staff Corps are under the command of the officers of the army medical staff.

Though the Medical Staff Corps furnishes hospital attendants for all duties, yet medical officers may detail convalescents for such duties as they are capable of performing.

---

*Read before the Association of Military Surgeons.

†Data from Military Information Division, War Department A.-G. O., U. S. Army.

‡Under instruction at the Army Medical School, Netley Hospital.

Soldiers from other units than the Medical Staff Corps are often detailed in lieu of or to supplement the establishment of hospital attendants. These are known as regimental hospital orderlies, and get extra pay.

Stretcher-Bearers.—In every military unit, at least four men per squadron, or two men per company, will be trained as the stretcher-bearers of the corps. When an action is about to begin, the trained regimental bearers, with the field stretchers, will be placed at the disposal of the medical officer attached to the unit.

Nursing Service.—The nursing service is divided into three grades: Lady superintendents; senior nursing sisters (or acting lady superintendents); nursing sisters. Nursing sisters are retired on pension after the age of sixty years. If disabled in service before that age, the amount of pension or gratuity is regulated by their length of service. They are rationed and allowed a uniform free of all expense, and have certain allowances. They are under strict discipline, and the lady superintendent is responsible to the principal medical officer that their work is properly done, etc. Nursing sisters serve abroad, being detailed for foreign service by the Director-General.

The lines of medical assistance in the field in active service, traced from front to rear of an army, are:

Medical Officers attached to units (with their company bearers):

Bearer Companies:

Field Hospitals:

Hospitals on the lines of communication:

General Hospitals at the base.

The British Army, or portions of it, may be mobilized either for service abroad or for home defense. The two states of mobilization vary considerably, especially in the sanitary and medical services.

For service abroad each army corps has six bearer companies and ten field hospitals; for home defense, six bearer companies and three field hospitals. Each army corps for service abroad has one principal medical officer, two surgeon-major assistants, and one orderly medical officer. Each infantry division and each cavalry division has its own principal medical officer and one surgeon-major assistant. Each infantry battalion of eight companies, as well as each cavalry regiment, has one medical officer; the corps artillery, two; each field or horse artillery division, one.

Each of the six infantry brigades of a corps has one bearer company and one field hospital.

Each of the three infantry divisions of a corps, and also each corps as such, has one field hospital.

The organization of the medical units (bearer companies and field hospitals) for service abroad, is as follows:

	Bearer Co.	Field Hosp.
Medical officers	3	4
Quartermaster	..	1
Warrant officers and sergeants	7	9
Buglers	1	..
Corporals	6	4
Privates	15	14
Privates as bearers	32	..
Privates as ward orderlies	..	14
Total, all ranks	64	46

Transport attached from Army Service Corps company:

	Bearer Co.	Field Hosp.
Officers	1	..
Warrant officers and sergeants	1	2
Artificers	2	1
Trumpeters	1	..
Corporals	2	2
Privates	5	3
Drivers	29	18
Total, all ranks	41	26

With the exception of those at Aldershot and Netley, bearer companies and field hospitals are not permanent establishments, being only formed on mobilization, etc. When organized they are under command of a medical officer.

Field hospitals are organized and conducted as laid down in the Regulations for Medical Services. They have a light equipment to enable them to be moved with the troops.

Hospitals on the lines of communication have a heavier equipment than field hospitals. They are established in such places and in such numbers on the lines of communication as may be necessary.

General hospitals at the base of operations will be fully equipped; a military depot will be attached to such hospitals.

Mobilization for Home Defense.—The number of staff and regimental medical officers for duty in the first line is practically the same for home as abroad. The organization of the medical units (bearer companies and field hospitals) is practically the same also, except that the *transport* attached is considerably diminished. The *number* of bearer companies and the *distribution* thereof are the same as given for service abroad, but the field hospitals are reduced to three, and only one is allowed to each infantry division. Cavalry divisions are not organized for home defense, and for each cavalry brigade one bearer company and a half-share in a field hospital are allowed.

VIII. THE ARMY OF THE UNITED STATES.

The war of the American Revolution, fought as it was for the most part by raw levies from the people—destitute of every material thing, even arms and ammunition—added little to the advancement of military sanitation. The Medical Department was, as a rule, poorly officered and badly equipped, and the sick were crowded into wretched huts or makeshift hospitals. Such organization as existed was borrowed from the British; there was no system of supplies or transport, and the ill and injured were very little better cared for than those of the Middle Ages who were "abandoned to crawl mayhap to the shelter of a monastery, or to die by the wayside."

The war of 1812 again found this country without sanitary organization. The lessons taught by the wars of the Directory and Empire, in which Percy and Larrey gained such distinction, had apparently made little or no impression upon the American profession, for the Sanitary Department was practically where the War of the Revolution had left it.

From a history of the Medical Department of the United States Army we learn that during this war general hospitals were established at various places on our northern frontier, as at Watertown, Albany, Malone, Buffalo, etc. I quote a single experience:

In September, 1811, the sick in hospital at Plattsburg, numbering 720, were, in view of the approaching fight, transferred to Crab Island. No accommodation had been provided for them on the Island, and they remained for three days exposed to the wet and cold, when Doctor Powell determined to transport them to Burlington, which he did in open bateaux across the lake. This crowded the hospital at Burlington to such an extent that the ill-effects of crowd-poisoning were soon perceived in the increased number of deaths and in the slow convalescence of the many. Typhus, dysentery and diarrhœa became prevalent.

As to what systematic provision was made for the transport of the wounded, and the various other details of sanitary organization so essential to an army, history is silent, and we can but infer that what was done in this direction was the outcome of each emergency as it arose.

During the war with Mexico we started out with a regimental hospital organization similar to that of the British Army during the Peninsula campaign of almost fifty years before. There were no men regularly trained to care for the sick, or to assist the medical officers in their care, the only plan being for a certain proportion of men from the ranks to be detailed for this service as the occasion demanded. The advantages of the French system had not yet impressed themselves upon our medico-military organization. To be sure, we had also base or general hospitals to receive the overflow, and our sick were generally well cared for—the number at no time being excessive; but the good work accomplished was not because of our system, but in spite of it.

After the conclusion of this war, while there was an appreciable advance in the quality of the *personnel* of the Medical Department, there is no evidence that any particular effort was made to perfect the sanitary organization of the Army; it remained as it had been from the beginning, without any such.

At the outbreak of the War of Secession the regular army numbered* 1117 commissioned officers and 11,907 enlisted men. The Medical Department was composed of one Surgeon-General with the rank of colonel, thirty surgeons with the rank of major, and eighty-four assistant surgeons holding for the

*Compiled from the Medical and Surgical History of the War of the Rebellion, and other sources.

first five years the rank of first lieutenant, and subsequent to that period (until promotion to surgeon) the rank of captain.

The officers of the Medical Department formed a portion of the general staff of the Army; were not permanently attached to any regiment or command, but were subject to duty wherever their services were needed. Experience had demonstrated this system to be the best for the necessities of an army widely scattered over an immense area of territory, serving in commands of less than regimental strength, while it possessed the advantage of increasing the efficiency and value of the medical force from a professional point of view.

At the beginning of hostilities in 1861, large forces of State troops, or militia, responded to the several proclamations of the President calling for aid in suppressing the rebellion. Each regiment was provided with a surgeon and an assistant-surgeon, commissioned by the State in which the troops had been enlisted. These officers were borne on the muster-rolls and permanently attached to the regimental organization, being seldom detached except for urgent reasons.

During the early military operations, the administrative duties pertaining to the Medical Department were performed by officers of the regular medical staff, detailed for the purpose, or by volunteer surgeons appointed as medical directors of divisions, as allowed by the President's proclamation of May 3d, 1861.

On the 22d of July, 1861, Congress passed an Act authorizing the President to raise a force of volunteers, not exceeding 500,000, and prescribing the organization of this levy into divisions of three or more brigades, and that "each brigade shall be composed of five or more regiments, and shall have one brigadier-general, two aids-de-camp, one assistant adjutant-general with the rank of captain, one surgeon, one assistant-quartermaster, and one commissary of subsistence." The surgeons authorized by this Act were known as brigade surgeons, and were borne as such on the official army registers of September, 1861, and January, 1862; they held the rank of major.

The condition of affairs that obtained about the time of the enactment of this law was graphically described in a report of Surgeon Charles H. Tripler, U. S. A., the first medical director of the Army of the Potomac, and one of the most distinguished officers of the Medical Department. He wrote:

I joined the Army of the Potomac August 12th, 1861, and was immediately charged with the organization of the Medical Department. . . . The Army was encamped on the south side of the Potomac, covering an extent of some miles from Arlington Heights to Alexandria, several miles down the river, and in and about Washington. There were some five or six hotels, seminaries, and infirmaries in Washington and Georgetown, occupied as general hospitals under capable officers, but with no system with reference to the admission and discharge of patients. Every regimental surgeon sent what patients he pleased to the general hospitals, without knowing whether there was any room for them or not, and men were discharged from hospitals with no means provided to insure their return to their regiments. It was not an unusual circumstance for sick men to pass the night in the ambulance, wandering about the streets from hospital to hospital seeking admission. I could find no information anywhere as to what regiments were present, or whether they had medical officers or not. . . . The regulations of the Army recognized only regimental and general hospitals. The regimental hospitals in the field were established in tents or in such buildings as might chance to be within the limits or immediate vicinity of each camp. The general hospitals available for the Army of the Potomac were the few old hotels or similar buildings occupied as hospitals in Washington, Alexandria, and Annapolis. There was no authority for any hospital establishment in the vicinity of the division or brigade that might relieve the regimental hospital tents. . . . The buildings already provided and occupied were seen at once to be totally inadequate. The entire hospital establishment in the above-named cities contained only 2700 beds.

Commenting upon this, Colonel Irwin (Medical Department U. S. A.) writes:

Such were the first meagre attempts to provide hospital accommodations for the invalids of an army numbering 140,000 to 180,000 men preparing for active service in the field! In further illustration of the disappointment caused in the public mind, and the confusion resulting from the absence of an adequate system of hospital organization to meet the demands of the vast numbers of military invalids suddenly thrown upon the

hands of the medical service, the words of Surgeon Tripler will convey some faint idea of the annoyance and unlooked-for interference that handicapped the Medical Department in the discharge of its onerous duties; he wrote: "I may mention here that a great deal of presumptuous intermeddling with the Medical Department of the Army occurred from time to time. Sensational preachers, village doctors, and strong-minded women, suddenly smitten with a more intricate knowledge and thorough perception of the duties and the administration of the medical department of an army, than I had been able to acquire in more than thirty years' experience and study, obtruded their crude suggestions, and marring where they could not make, and paralyzing when they attempted to quicken, succeeded by their uninformed zeal, innocently enough perhaps, but not the less unfortunately on that account, in defeating measures I had much at heart, had carefully contemplated, and intended to carry into effect at the proper time."

The duties, prerogatives and responsibilities of brigade surgeons being somewhat vaguely defined, the following bill was passed by Congress on July 2d, 1862:

From and after the passage of this Act, brigade surgeons shall be known and designated as Surgeons of Volunteers, and shall be attached to the general medical staff under the direction of the Surgeon-General; and hereafter such appointments for the medical service of the Army shall be appointed surgeons of volunteers.

The brigade surgeons, or Surgeons of Volunteers as they were henceforth called, were assimilated to those of the regular staff, holding equal rank with the latter under commissions conferred by the President and confirmed by the Senate. They became eligible to all the duties and prerogatives pertaining to the medical officers of the Army, whether in the field as directors of armies, corps, or departments, or in charge of hospitals, etc. From time to time, by Acts of Congress, additions were made to the regular and volunteer corps, and such changes effected as were necessarily demanded. The Act of April 16th, 1862, was one of the most important of these, wherein the rank of brigadier-general was conferred upon the Surgeon-General. Provisions were also made in this Act for an assistant surgeon-general and a medical inspector-general — both with the rank, pay, and emoluments of colonel of cavalry,—and for eight medical inspectors, with the rank, pay, and emoluments of lieutenant-colonel of cavalry; also for medical purveyors and medical cadets.

The text of the law is here inserted:

An Act to reorganize and increase the efficiency of the Medical Department of the Army.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That there shall be added to the present medical corps of the Army, ten surgeons and ten assistant-surgeons, to be promoted and appointed under existing laws; twenty medical cadets, and as many hospital stewards as the Surgeon-General may consider necessary for the public service, and that their pay and that of all hospital stewards in the volunteer as well as the regular service shall be thirty dollars per month, to be computed from the passage of this Act. And all medical cadets in the service shall, in addition to their pay, receive one ration per day, either in kind or commutation.

Sec. 2.—And be it further enacted: That the surgeon-general to be appointed under this Act shall have the rank, pay and emoluments of a brigadier-general.

There shall be one assistant surgeon-general, and one medical inspector-general of hospitals, each with the rank, pay and emoluments of a colonel of cavalry; and a medical inspector-general shall have, under the direction of the Surgeon-General, the supervision of all that relates to the sanitary condition of the Army, whether in transports, quarters, or camps, and of the hygiene, police, and discipline and efficiency of field and general hospitals, under such regulations as may hereafter be established.

Sec. 3.—And be it further enacted: That there shall be eight medical inspectors, with the rank, pay and emoluments each of a lieutenant-colonel of cavalry, and who shall be charged with the duty of inspecting the sanitary condition of transports, quarters and camps of field and general hospitals, and who shall report to the Medical Inspector-General, under such regulations as may hereafter be established, all circumstances relating to the sanitary condition and wants of troops and of hospitals, and to the skill, efficiency, and good conduct of the officers and attendants connected with the Medical Department.

Sec. 4.—And be it further enacted: That the Surgeon-General, the Assistant Surgeon-General, Medical Inspector-General, and medical inspectors, shall, immediately after the passage of this Act, be appointed by the President, by and with the advice and consent of the Senate, by selection from the medical corps of the Army, or from the surgeons in the volunteer service, without regard to their rank when so selected, but with sole regard to qualifications.

Sec. 5.—And be it further enacted: That medical purveyors shall be charged, under the direction of the Surgeon-General, with the selection and purchase of all medical supplies, including new standard preparations, and of all books, instruments, hospital stores, furniture, and other articles required for the sick and wounded of the Army. In all cases of emergency they may provide such additional accommodations for the sick and wounded of the Army, and may transport such medical supplies, as circumstances may render necessary, under such regulations as may hereafter be established, and shall make prompt and immediate issues upon

all special requisitions made upon them under such circumstances by medical officers; and the special requisitions shall consist simply of a list of the articles required and the quantities required, dated, and signed by the medical officers requiring them.

Sec. 6.—And be it further enacted: That whenever the Inspector-General or any of the medical inspectors shall report an officer of the medical corps as disqualified by age or otherwise for promotion to a higher grade, or unfitted for the performance of his professional duties, he shall be reported by the Surgeon-General for examination to a medical board as provided by the seventeenth section of the Act approved August 3d, 1861.

Sec. 7.—And be it further enacted: That the provisions of this Act shall continue and be in force during the existence of the present rebellion, and no longer: Provided, however, that, when this Act shall expire, all officers who shall have been promoted from the medical staff of the Army, under this Act, shall retain their respective ranks in the Army, with such promotion as they would have been entitled to.

Approved April 10th, 1862.

Besides the medical officers of the regular and volunteer staff, and the medical officers of regiments, there was a class designated as Acting Assistant Surgeons, who were private physicians, uncommissioned, serving under contract to do duty with the forces in the field or in general hospitals. This class was very large, and embraced in its number some of the most eminent surgeons and physicians of the country. The medical cadets were generally young men, students of medicine, who were assigned to duty in general hospitals as dressers and assistants.

The Medical Department was still further increased by a number of hospital stewards, who were enlisted as needed, and who performed the duties of druggists, clerks, and storekeepers.

During the years of the war the organization of the regular staff had been increased so as to number one Surgeon-General, one Assistant Surgeon-General, one Medical Inspector-General, sixteen medical inspectors, and 170 surgeons and assistant-surgeons; there had been appointed 547 surgeons and assistant-surgeons of volunteers; there were mustered into service between April, 1861, and the close of the war, 2109 regimental surgeons and 3882 regimental assistant-surgeons. During the same period there were employed eighty-five acting staff surgeons and 5532 acting assistant-surgeons.

To the fidelity and efficiency of this vast body of professional men the Surgeon-General, in his annual report of 1865, bears the following well deserved tribute:

I desire to bear testimony to the ability, courage, and zeal manifested throughout the war by the officers of the Medical Department, under all circumstances and upon all occasions. With hardly an exception, they have been actuated by the highest motives of national and professional pride, and the number who have been killed or wounded bears honorable testimony to their devotion and duty on the field of battle.

The following record of casualties of the regular and volunteer staff during the war shows well for the honor of those who are erroneously supposed to escape the dangers and chances of war:

Thirty-two were killed in battle, or by guerillas or partisans, and nine by accidents; eighty-three were wounded in action, of whom ten died; four died in rebel prisons, seven of yellow fever, three of cholera, and 271 of other diseases, most of which were incidental to camp life or the result of exposure in the field.

Of the amount of labor performed by the medical staff during the war, some idea may be obtained when it is stated that 5,825,480 cases of wounds and diseases occurred among the white troops, and 629,354 cases among the colored troops.

The cost of maintaining the Medical Department formed no small portion of the total expenses of the war, and it is a matter of just pride that it can be said that the medical disbursing officers performed their duties faithfully and honestly, and that the immense quantities of medical supplies distributed all over the country were almost without exception properly accounted for. The expenditures on behalf of the Medical Department to the close of each fiscal year, on the 30th of June, from 1861 to 1866, were as follows:

1861	$ 194,126 77
1862	2,371,113 19
1863	11,594,650 35
1864	11,025,791 33
1865	19,328,499 23
1866	2,837,801 37

Making a total of $47,351,982.24, expended during the war (exclusive of salaries of commissioned officers) for the benefit of the sick and wounded soldiers of the nation.

After the organization of the forces raised for the suppression of the rebellion was perfected, the medical service in the field was based upon an independent hospital and ambulance establishment for each division of three brigades. The *personnel* of the division hospital consisted of a surgeon in charge, with an assistant surgeon as executive officer, and a second assistant-surgeon as recorder; an operating staff of three surgeons aided by three assistant-surgeons, and the requisite number of nurses and attendants. The division ambulance train was commanded by a first lieutenant of the line, assisted by a second lieutenant for each brigade. The enlisted men detailed for ambulance duty were: A sergeant for each regiment, three privates for each ambulance, and one private for each wagon. The ambulance train consisted of from one to three ambulances for each regiment, squadron, or battery, a medicine wagon for each brigade, and two or more supply wagons. The hospital and ambulance trains were under the control of the surgeon-in-chief of the division. The division hospitals were usually located just out of range of artillery fire. Sometimes three or more division hospitals were consolidated under the orders of a corps medical director, who was assisted by his medical inspector, quartermaster, commissary, and chief ambulance officer.

The medical officers not employed at field hospitals accompanied their regiments and established temporary depots as near as practicable to the line of battle.

As soon as possible after every engagement, the wounded were transferred from the division or corps hospitals to the base or general hospitals, which at one time numbered 205; these were under the charge and command of the regular or volunteer staff, assisted by acting assistant-surgeons, medical cadets, and officers of the second battalion of the veteran reserve corps.

Ambulance Corps.—The necessity for a drilled and instructed corps for the transportation of wounded from the field is apparent to every one who will consider the subject. The importance of having the wounded rapidly removed from the scene of strife must be conceded, not only on the score of humanity, but also as a military necessity. Without a detachment whose duty it is to attend to this service, the natural impulse of sympathy will draw men from the ranks to assist their fallen comrades, while the pretext is a temptation to the faint-hearted to shirk the perils of their position. Moreover, the courage of troops under fire would be sustained if they were assured that reliable men would be ready to bear them rapidly from the vicissitudes of conflict and to tender them early assistance. No organized ambulance corps existed in the Army at the beginning of the war, but the necessity of such an organization, under the control of the Medical Department, was early recognized by the medical officers, and already in April, 1862, Medical-Director Tripler, of the Army of the Potomac, called attention to the absolute necessity of having an experienced quartermaster and assistant commissary of subsistence attached to the command of the chief medical officer of an army in the field. He wrote:

I find it impossible to secure either transportation or subsistence for the men thrown upon my hands, without tedious delays and much unnecessary suffering. Time, which is so valuable to me now, is taken up and wasted in endeavors, too often unsuccessful, to get together ambulances and wagons, to have these trains properly and economically conducted, to have boats prepared and in position, to procure buildings for hospitals, to get subsistence for the sick and wounded, and, in short, doing the duty assigned to quartermasters and subsistence officers. It seems to me that to bring this evil to the notice of the Secretary of War will be sufficient to cause its instant remedy; at all events, I protest beforehand against the Medical Department being held responsible for evils they have no possible means of obviating. My experience in this campaign has taught me that without an executive officer of these two important departments under my command, more time is lost in negotiating through second and third parties, with an even chance of not getting at all what is wanted, and a certainty of not getting it in time, than would be required in procuring what is necessary and having it in the right place if these officers were placed at my disposal.

On August 21st, 1862, Surgeon-General W. A. Hammond, U. S. Army, in a letter to the Secretary of War, urged the necessity for such a corps:

SURGEON-GENERAL'S OFFICE,
WASHINGTON, Aug. 21, 1862.

Honorable Edwin M. Stanton, Secretary of War:

SIR: In accordance with your verbal permission, I have the honor to submit to you the inclosed project for an Hospital Corps, and to ask your favorable consideration for the same. The plan is merely submitted as a basis on which the corps can be organized; much will remain to be done by regulations; and I propose, should you approve the inclosed outline, to ask for a board of medical officers to perfect the organization. I have not considered it necessary to enter into details; the first thing essential is to obtain your sanction to the organization of such a corps. The need for it is most urgent. In no battle yet have the wounded been properly looked after; men under pretense of carrying them off the field leave the ranks and seldom return to their proper duties. The adoption of this plan would do away with the necessity of taking men from the line of the army to perform the duties of nurses, cooks, and attendants, and thus return sixteen thousand men to duty in the ranks. In view of these facts, and many others which could be adduced, I respectfully ask your approval of the inclosed project.

I am, sir, very respectfully,
Your obedient servant,
(Signed) WILLIAM A. HAMMOND,
Surgeon General.

To this the following answer was received:

WAR DEPARTMENT,
WASHINGTON CITY, D. C., Aug. 29, 1862.

SIR: The Secretary of War directs me to acknowledge the receipt of your communication of the 21st instant, submitting a project for a Hospital Corps, and to inform you that the subject was referred to the General-in-Chief, whose views, adverse to the project, are expressed in the following words: "Our army trains are already much too large, and very seriously impede the movements of our troops in the field. The enemy have great advantages over us in this respect. To organize such a medical force as is here proposed would, besides involving enormous expenses, greatly increase this evil. Moreover, the presence of non-combatants on or near the field of battle is always detrimental, as most panics and stampedes originate with them. Medical soldiers would not obviate the necessity of sending fighting soldiers from their ranks with their wounded, for the former would seldom be near enough to the enemy to perform that duty. The soldier can be very much relieved by hiring cooks, nurses, and attendants in hospitals, whenever the circumstances will permit; but I can see no advantage in having them enlisted for that special purpose. All persons so employed are, by law, subject to Army regulations. I regard this project as one calculated to increase the expenses and immobility of our army by adding to it a large corps of non-combatants, without any corresponding advantages. I therefore report against its adoption."

(Signed) P. H. WATSON,
Ass't Sec'y of War.

SURGEON-GENERAL, Washington, D.C.

A second appeal was made to the Secretary of War on September 7, 1862:

SURGEON-GENERAL'S OFFICE,
WASHINGTON, D. C., Sept. 7, 1862.

Sir: I have the honor to ask your attention to the frightful state of disorder existing in the arrangements for removing the wounded from the field of battle. The scarcity of ambulances, the want of organization, the drunkenness and incompetency of the drivers, the total absence of ambulance attendants, are now working their legitimate results, results which I feel I have no right to keep from the knowledge of the Department. The whole system should be under the charge of the Medical Department; an ambulance corps should be organized and set in instant operation. I have already laid before you a plan for such an organization which I think covers the whole ground, but which I am sorry to find does not meet with the approval of the General-in Chief. I am not wedded to it. I only ask that *some* system may be adopted by which the removal of the sick from the field of battle may be speedily accomplished, and the suffering to which they are now subjected may be, in future, as far as possible avoided. Up to this date six hundred wounded still remain on the battle field in consequence of an insufficiency of ambulances and a want of a proper system for regulating their removal, in the Army of Virginia. Many have died of starvation, many more will die in consequence of exhaustion, and all have endured torments which might have been avoided. I ask, sir, that you will give me your aid in this matter, that you will interpose to prevent a recurrence of such consequences as have followed the recent battle, consequences which will inevitably ensue on the next important engagement if something is not done to obviate them.

I am, sir, very respectfully,
Your obedient servant,
(Signed) WILLIAM A. HAMMOND,
Surgeon-General U. S. A.

HONORABLE E. M. STANTON, Secretary of War.

This also was referred to the General-in-Chief, and was returned endorsed as follows:

HEADQUARTERS OF THE ARMY,
WASHINGTON, Sept. 15, 1862.

I am informed by the Quartermaster-General that every effort is being made to supply a large number of ambulances. It is proper to remark, however, that the enemy have provided for their wounded on every battle-field with not one-half the ambulances and other facilities provided for our armies. I do not perceive how the drunkenness and incompetency of drivers are likely to be prevented any more by putting the ambulances exclusively under the direction of the Medical Department. It is the duty of all officers to furnish fatigue parties, properly officered, on the requisition of medical officers, for the care and removal of the wounded, and it is the duty of all medical officers to make such requisitions, and if not filled, to report the neglect. No such neglect has been reported by medical officers on the recent battle-fields. My objections to the proposed organization of a separate non-combatant corps to be attached to the Medical Department were set forth in my endorsement upon a former letter of the Surgeon-General.

(Signed) H. W. HALLECK,
General-in-Chief.

(*To be continued.*)

GRENADILLE POISONING.

Doctor J. H. Smith, before the Homœopathic Medical Society of Massachusetts, details several cases of "flute poisoning." Grenadille, or cocus wood, has for many years been employed in the manufacture of this musical instrument, inasmuch as it gives a brilliant and powerful sound, which mellows and becomes more flexible with the age of the instrument. Doctor Smith says: "There is most trustworthy testimony from Germany, England and America to the fact that cocus wood, and no other material, is found by certain susceptible flutists capable of producing serious irritation of the lip, necessitating the use of a crescent-shaped silver or gold lip-plate shellacked to the mouth-hole or embrazure." Doctor Smith describes the malady as a lip excessively swollen, extremely red, with large blotches covered by vesicles. Relief is had by the application of a solution of nitrate of lead in water, 1 to 2000.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., NOVEMBER 25th, 1895.

Editorial.

A GOOD SERVANT BUT BAD MASTER.

When the very manufacturers of tablet triturates and compressed tablets feel constrained to protest against the extremes to which the employment of these medicaments has been carried, it would seem high time for the profession to pause and ponder. It is unquestionable that many physicians place too implicit a reliance on tablets, and fail to weigh properly the disadvantages inherent to this class of medicaments—disadvantages which no skill in manufacture can possibly eradicate. A considerable number of drugs may with perfect propriety be administered in tablet form, but to many others the tablet is utterly unsuited.

At this writing we have before us the candid admission of the most extensive manufacturer of compressed and triturate tablets in the United States. With commendable frankness this reputable firm declares that it is an error to demand or employ tablets of volatile, readily deliquescent or delicate medicaments, and specifies some of the pharmaceutical monstrosities in current and popular use—combinations which have no *raison d'être*. What, for example, is the use of administering in tablets hopelessly volatile substances like creosote, ammonium carbonate, menthol, camphor, and similar drugs? Further striking instances might be cited: Calomel and sodium, if exhibited at all in tablets, should be present only in small proportions; any considerable proportion of camphor combined with salol would liquefy

the tablet; phosphorus oxidizes readily; solid extracts deteriorate; and benzoic acid is entirely unsuited to this form of medication.

Such are the disadvantages of tablets which positively no skill in manufacture can overcome—interested claims to the contrary notwithstanding. The manufacturer may do his whole duty, may place in every tablet the ingredients specified, may even issue a tablet that is active and reliable when it leaves his hands; but deterioration, in many instances, is sure to follow. Hence it is the duty of all physicians to discriminate carefully, in employing this class of medicaments, selecting only formulas regarding which there can be no question.

The tablet fad is bound ultimately to correct itself by its very extravagance. To-day many dispensers seem to believe any and every kind and form of medicament may be administered in the convenient disc form; and, as the manufacturer quoted dryly remarks, we shall presently see dispensers ordering tablets of chloroform, alcohol, and aqua pura. Tablets are, perhaps, under certain circumstances legitimate conveniences, but they have their limitations and are assuredly not worthy of indiscriminate employment. Beware of the tablet fad! Abjure all tablets purporting to contain resins, alkaloids, tinctures, and other volatile or easily changed medicaments.

TREATMENT OF GALL-STONES.

Every little while we find in some journal wonderful revelations of the value of olive oil or glycerin, or some such substance, in the treatment of gall-stone. This fallacy, for some reason or other, will not down, though the fact remains that neither olive oil or glycerin is of any practical value, and that the so-called gall-stones that are supposed to be removed by these medicaments are nothing more than concretions of fat of which the medicaments themselves are the chief basis.

Recently we saw a paper in which the declaration was made that there is absolutely no remedy for gall-stone except the surgeon's knife. This is simply rubbish.

During the last year or two we have published in THE MEDICAL AGE contributions to the literature of gall-stones from Doctors Buckler, Ouchterlony, and others. Succinate of iron is to-day recognized by all who have had experience therewith as a remedy of practical value, not only in relieving gall-stones, but in preventing further aggregation thereof. To be sure, an impacted gall-stone may be little amenable to treatment; yet even this, if not too large, may often be remedied by the internal administration of chloroform.

Doctor Buckler speaks of the treatment of gall-stone by succinate of iron and chloroform as a satisfactory reclamation from surgery—which, to a great extent, is true.

It speaks little for either medical or chemical knowledge when practitioners write of gall-stones removed by the aid of sweet oil and glycerin, which, as before remarked, are the basis of the concretions (soap balls, in fact)—backed by the influence of intestinal secretions, and shaped by vermicular action—which are mistaken for true biliary calculi.

MEDICAL BIBLIOGRAPHY AND THE INDEX MEDICUS.

Le Progrès Médical recently discussed the problem of medical bibliography "*à propos la mort lamentable*" of the *Index Medicus*. The editor holds that while the demise of the *Index* was untimely and deplorable, it was nevertheless a somewhat legitimate and natural event, since, though this periodical was "useful, erudite, and complete, it did not solve the bibliographic problem; it was rather an opportunist effort." Our French *confrère*, moreover, opposes the rehabilitation of the journal in its old form, because "there is a science of bibliography" which it believes Doctors Billings and Fletcher are masters of. "The *Index Medicus* did not give the true solution of the best way to present to the medical public the current scientific work of the world."

Commenting on the foregoing, the *Medical Record* adds this is precisely the idea it "has on several occasions presented and advocated:" it has ever "disliked to show antagonism to so useful a journal, but it has always seemed as though the publication would be more popular if the arrangement were different, the number of issues less fre-

quent, and the classifications somewhat more in accord with modern nosology."

THE MEDICAL AGE has on a previous occasion pointed out the advantages that might accrue if certain changes were embodied in the *Index Medicus* in case the latter is re-established. These are worthy of extended consideration on the part of the editors and publisher—at the same time we recognize the difficulty of meeting all the demands of the situation. We likewise believe such a journal would be more successful if published as a semi-annual or quarterly rather than in its former monthly form.

DEATH FROM NITROUS OXIDE.

It has long been popularly held that nitrous oxide is an absolutely safe anæsthetic—one from the use of which death could not possibly occur under any circumstances. Those who, however, have observed the peculiar cyanosis which arises during pronounced anæsthesia from this agent have always felt that behind its apparent safety there must be lurking some serious element of danger. And now the *Druggists Circular* reports the death of a young woman in New York under the influence of this anæsthetic, which had been taken for the removal of four teeth; moreover, the young woman had on a previous occasion submitted to the same operation under like circumstances with no ill-effects.

That such cases are rare—fortunately—must be admitted; but the very fact that they do occur should serve to make those who administer this anæsthetic extremely cautious. "It is the unexpected that happens," is an aphorism especially pertinent to anæsthesia, no matter what may be the agent employed to induce this condition.

DOCTOR THOMAS KEITH.

Doctor Keith is dead. His career is an illustration of the fact that much of the best work for the benefit of mankind is done by men who are themselves invalids. Doctor Malcom Morris, editor of *The Practitioner*, remarks: "Doctor Keith's life was one long struggle against ill-health, with frequent episodes of acute suffering, of one of which I was myself a witness. Yet, among the pioneers of abdominal surgery, who was a more strenuous or more successful worker than he? With better health Keith might have done more for surgery, but he could hardly have done better for his profession, for he has left it the example of a grandly heroic character and a life of lofty aims nobly carried out."

EDITORIAL NOTES.

The Feigning of Death.—

A discussion in *Nature** regarding the feigning of death in reptiles induced an experiment on the currant moth, whose powers of "shamming" are so familiar. Oswald H. Latter states he first seized a moth by one wing, when it at once feigned death; thereupon he cut off its head with a pair of scissors, yet it *continued to feign death*—absolute immobility was maintained for some seconds, and then violent fluttering ensued, causing the creature to rush wildly about the table, though it failed to rise into the air. In this condition any impulse, such as touching or pinching, induced a repetition of "shamming." After a strong stimulus the shamming was prolonged, and indeed a direct connection was obvious between the strength of stimulus and the length of period of quiescence. This power of response to stimulus was maintained for two days, then weak fluttering set in, followed in a few hours by real death.

The utter lack of any information regarding the physiology of the nervous system of insects, renders it impossible to draw complete conclusions from these phenomena; nevertheless, it is difficult to conceive that volition can persist for forty-eight hours in a decapitated animal. One is at any rate forced to conclude that here death-feigning is a purely reflex phenomenon, and that the sensory stimulus received by the surface of the body causes inhibitory impulses to arise reflexly from the ganglia of the central nerve chain, preventing all movement of the locomotor muscles. In confirmation of this, it may be mentioned that denuding the wing of its scales over any area caused a marked

*Vol. li, pp. 107, 128, 223, and vol. lii, p. 148.

diminution of sensitiveness over the part so treated. Since all stages between sensory hairs and ordinary scales occur in Lepidoptera, it is not unreasonable to assume that the scales still functionate as tactile end-organs, in spite of their modification subserving decorative purposes.

Getting the Worth of Their Money.—

The *Druggists Circular*, in a recent editorial dealing with so-called "lodge practice," supplies a great deal of interestiug information. It narrates the experience of a young physician who took the average contract to doctor a club or society with a membership of about 1500 in one of the poorer districts of the city. He was to receive a certain sum per annum for this service, and the result was he had a wholly unlooked-for army of patients to attend to; even when a child scratched its finger he was summoned to dress it; and some of his patients, not content with demanding services upon any and all occasions for themselves, palmed off on him, as members of their own family, neighbors from whom they themselves collected a small fee. When the doctor summed up his work he found he had an average of thirty calls a day from this society. He was worn out with labor, could find no time for profitable practice, and discovered he received about three-quarters of a cent for each visit made. It is needless to add he has had enough of "society" practice, and will never again be a candidate for any position of this kind.

It is notorious that when a physician or pharmacist contracts with a lodge or society, each individual member considers it his or her solemn duty to get the utmost service out of the unfortunate contractor. Such contracts are inimical to the best interests of either patient, physician, or pharmacist, and are always a matter of loss and worry to all concerned.

Reflex Surgery.—

The *International Journal of Surgery* insists that the "operation itch," which has so thoroughly permeated the profession during the last quarter-century, is far from creditable. Commenting upon a case of melancholia reported to have been operated upon for varicocele and stricture, and to have had the pubic artery ligated, castration performed, hæmorrhoids removed by the knife, to have worn glasses, had his eye muscles cut and one eye enucleated, been circumcised, had his spine cauterized, and worn a seton in his neck—being at last effectually relieved by the removal from his nose of a thickened cartilaginous septum and the left middle turbinate,—the *Journal* adds:

> Inspection of the newest encyclopedic works dealing with surgical matters reveals the fact that a very large number of operations were omitted from this category. It is with pain we observe the operation for appendicitis was not performed, and that the patient's neck was not ornamented with the results of thyroidectomy.

Why not send the patient to St. Louis or Chicago? They do not make such mistakes of omission as these in the "wild and woolly."

For Alcoholism.—

In the *Medical World* Doctor Matchette makes the claim that in treating the alcohol habit he has but two per cent. of failures. His method consists of subcutaneous injection of sulphate of Hydrastine, beginning with one-fiftieth of a grain and increasing the dose until one-twentieth is given four times a day—preceded by a hot bath and a cathartic; valerian and bromides are employed to combat nervous conditions; and for the first few days the patient is supplied with a generous quantity of spirits.

The alleged anti-alcoholic action of Hydrastine is certainly somewhat of a revelation.

Principal Peterson.—

A deserved tribute has been given to Professor William Peterson by his election to the position of Principal of McGill University. Doctor Peterson is one who from his position will be able to carry out the demands of this University, and smother the petty jealousies that are prone to arise between the English and French races inhabiting the Province of Quebec.

The Index Medicus.—

The subscriptions to this periodical up to Nov. 15th, inclusive, amount to $4,450.

Items and News.

Medical Literature.—

Too much of current medical literature and too many of the standard text-books of the day are made up of the results of hospital experience. An article on the management of 300 cases of pneumonia in some large hospital does not help the country practitioner to treat his case down on the river bank in a little one-room cabin with one door and no window, whose diet must depend altogether upon what he can get. It is useless to tell such a practitioner that in 1000 cases treated with veratrum viride there were seventy per cent. of recoveries, or that in 15,000 cases treated with strychnine the death rate was but twenty per cent. More than likely the reply would be that he treats every case according to indications and that his percentage of recoveries is 90 to 100 per cent.

The tendency of our current literature is to increase empiricism rather than to diminish it; and if the men who have the advantages of large hospitals where systematic methods of treatment can be carried out upon large numbers of cases, would study more carefully the physiological action, and embody in their reports a carefully prepared and scientific *résumé* of the definite results obtained in each case, the benefits would be greater and the appreciation more marked.—*Kansas Medical Journal.*

Longevity in France.—

France still maintains its old reputation as greatly favoring old age. Doctor Salmon, who has just passed his 105th year, is still active and bright; and Doctor Boissy, of Havre, who has passed his 103d year, is as active as ever and practicing his profession —his father died at the age of 108. There still exists one survivor of the Grand Armée of Napoleon's heroes who trudged from Portugal to Moscow—Victor Baillot by name, now 102 years of age. He was one of the combatants at Waterloo. There are, besides Baillot, three survivors of Waterloo still living in France, namely: Julien Rose, born April 22d, 1794; Sebastien Brouant, born March 31st, 1796; and a veteran named Vanoye, born December 18th, 1792. At the beginning of the year 1895 there were still six of the old Napoleonic soldiers on the rolls; of these, two have since died, one of whom was born in April, 1792, and the other in April, 1794. As the youngest of these survivors is nearly a centenarian, the roll of Napoleonic veterans will soon be extinct. That which is most remarkable about French longevity is the fact that it also maintains the mental and physical activity of man to a much greater period than is found elsewhere.—*National Popular Review.*

Warning.—

A certain advertising dispensary and cure-all has a large corps of correspondence clerks, and its safes preserve the confessions of almost a million miserable and foolish people. This correspondence is tabulated and followed by a record of the treatment, and, what is of more moment, of the contract and the moneys paid on it. Not long ago a like concern failed, and among the most valuable of its assets were similar records of 200,000 dupes. These the first great business house referred to bought of a speculator, agreeing to pay fifty cents apiece for each new name of a living person. In checking up their lists, 60,000 of the 200,000 were found to be already on their books. Perhaps all readers of newspapers have noticed an advertisement for a lock of hair, upon receipt of which the advertiser agrees to tell the sender's fortune and cure his disease. The author of this "fake" recently retired from business, and his correspondence, including over 600,000 locks of hair, was sold to an advertising concern. These are simply samples of business principles applied to medicine. — *Medical News.*

The New Liquor Law in Russia.—

With a view to diminish drunkenness without reducing the revenue, as well as to regulate the prices of spirits and utterly suppress adulteration and sophistication, the Russian Imperial Government has issued a *ukase* that on and after the 1st of July, 1896, distilleries, private clubs, bars and liquor shops will be abolished in eight provinces where the Government will monopolize the manufacture, distribution, and sale of spirits. In the July following the system will be extended to seven other provinces, and on the 1st of January, 1898, to the remainder of the Russian territories.—*Indian Medical Gazette.*

[Suppose the United States were to follow suit, what a deal of good would be done by putting a stop to the import and sale of TONS of *vile* stuff sold as genuine brandy, whiskey, wine, etc.!—ED.]

The Results of Civilization.—

The increased complexity of our civilization indicates the survival, not of the fittest, but of the *unfittest*, and these in their turn—

with the seeds of insanity or other grave disorders lurking in their organizations—marry and propagate disease and madness. Marriage, in short, is not physiologically considered, and only too often the most mercenary and sordid considerations are factors in uniting two people altogether unsuited to one another, and whose marriage is the consummation of physical ruin. On the other hand, owing to selfishness and self-indulgence, marriage in some sections of the community is long deferred, and the unnatural suppression of a natural instinct is a prime cause of deterioration, mental worry, and very frequently moral degeneration.—*Calcutta Medical Reporter.*

Biting the Nails.—

Bérillon expresses the opinion that onychophagia and similar habits are generally associated with degeneracy. The frequency of nail-biting varies greatly; in some eleemosynary institutions, two or three out of every ten children are addicted to the habit, and careful examination invariably reveals signs of degeneracy. Such children are generally less healthy in appearance than others, presenting deformities of the skull and anomalies of the teeth and ears; often exhibit marked antipathy to physical exercise and games requiring effort; write poorly, and show marked inferiority in manual dexterity; are slow to learn, and incapable of continuous application; in short, always exhibit an inferiority in some direction or other.—*Medical Week.*

An Epigram.—

An old writer has tersely described the ingratitude of the recovered patient, in an epigram in Timothie Kendall's "Flowers of Epigrams," 1577:

OF PHISITIONS.

Three faces the Phisition hath.
First as an Angell he,
When he is sought; next when he helpes,
A god he seems to be;
And last of all, when he hath made
The sicke, deseased, well,
And asks his guerdon, then he semes
An oughly Fiend of Hell.

—*Johns Hopkins Bulletin.*

Hauled Up Again.—

The Marion-Sims College of Medicine, St. Louis, which was charged recently with having graduated a student on one course of lectures, was summoned to appear before the Missouri Board of Health at its meeting held the first week in September. The College was charged with issuing a catalogue containing statements at variance with the requirements of the Missouri Board. The secretary of the school claims he was never notified of the modified regulations of the Board. Fortunately, it is a principle of law that ignorance is no excuse.—*North American Medical Review.*

Medical Heroism in the Chino-Japanese War.

The *Broad Arrow* speaks in glowing terms of the unflinching courage shown by the Japanese Red Cross men who were always "well to the front" with stretchers and first-aid appliances for their comrades, and, in spite of withering fire, did not hesitate, but went about the battle-field, picking up dying and wounded as calmly and stolidly as if on parade or under review-inspection.—*Indian Medical Review.*

Transmission of Cancer to Animals.—

After a long series of experiments on the transmissibility of carcinoma from man to animals, Emboinet states that histologic examinations of lesions thus produced in the rat, the rabbit and the guinea pig do not authorize him to pronounce in favor of such transmission.—*La Semaine Médicale.*

Fear in Chloroform Narcosis.—

I am inclined to put down fear as one of the most determinate causes of fatality from chloroform. I know of several instances in which it was impossible that chloroform, *minus* fear, could have been the direct cause of death, because sufficient of it was not administered to produce death.—RICHARDSON.

A Cause of Prostitution.—

The insufficient wages paid by many of our leading merchants to young women in their employ is unquestionably a strong ætiological factor in the development of prostitution.—DOCTOR DENSLOW LEWIS, in *Medical Record.*

Anti-Fat.—

In order to reduce his weight,
He purchased him a wheel;
Before he'd ridden it a week
He fell off a good deal.

—*Medical Record.*

A Grave Offense.—

Whoever adds one tittle that is unnecessary to medical education is guilty of a very grave offense.—HUXLEY.

Book Reviews.

SUN AND SHADE. Price, 50 cents; $4.00 per year. New York Photogravure Co., New York.

The issue for October is especially delightful. "Psyche by Moonlight," printed in colors, is from a painting by William Kray, of Munich. There is a lifelike portrait of Samuel Langthorne Clemens, better known as "Mark Twain." "Reverend Johannes A. Oertel in His Studio" is a photogravure from a photograph by J. F. Oertel; "Study of a Head" is a photogelatin by Mr. Chambers. A beautiful photogravure represents General Buford's monument, a bronze statue at Gettysburg; another is "Dido," from a painting by Sir Thomas Lawrence; "Now I Lay Me Down" is another charming photogravure, from a flash-light picture; "Representative New York Architecture" is a photogelatin of the front of the Catholic Club House. All these pictures are representatives of the highest type of art, and the wonder is that such a collection can be afforded each month for so low a price.

THE MONTHLY ILLUSTRATOR. Price, 30 cents; $3.00 per year. Harry C. Jones, New York.

The November issue contains: "My Pet Subject," by Arthur Hoeber; "Hens and Chickens," by Elizabeth Lewis; "Art and Artists on the Pacific Coast," by J. Ivey; "The Royal Flower of Japan," by Lillian E. Purdy; "The Oldest Profession in the World," by Mary T. Earle; "A Lady of Arcadia," by T. J. Mackey; "Some War-Time Envelopes," by P. E. Todd; "Edison on Inventions," by R. R. Wilson; "The Gallows-Bird — A Story of the Revolution," by S. J. Ross; "Cuxhaven to Constantinople," by C. H. Allers; "English Fads and Fancies," by T. C. Copeland; "The Rector of Radbourne," by Henry Mann; "Childhood," by Florence H. Winterburn. There are the usual editorial departments.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

The November number opens with an illustrated article on "Canada's Greatest Prison," by W. J. McLeod. Other articles are: "The Legend of St. Alban," by W. Proudfoot; "Told Over a Stile," by Lee Wyndham; "The British House of Commons," by J. W. Longley; "A Dangerous Experiment," by Maud Ogilvy; "Adele Berthier," a story of Old Quebec, by Thomas Swift; "Benjamin Kidd's Parley with Religion," by Reverend W. J. Lhamon; "The Captor Captured," by Daphne Dare; "A Decade of Fads," by Reginald Gourlay; Irving's new play, "King Arthur," by J. W. Cunliffe; "The Copyright Question," by Dan. A. Rose.

NORTH AMERICAN REVIEW. Price, 50 cents; $5.00 per year. North American Review Company, New York.

In the November number appear: "The Plague of Jocularity," by H. H. Boyesen; "What Becomes of College Women?" by C. F. Thwing; "Jingoes and Silverites," by Edward Atkinson; "Our Acquisition of Territory," by Major-General N. A. Miles; "Industrial Development of the South," by the Governor of Alabama; "Girlhood of an Actress," by Mary Anderson; "The Municipal Spirit in England," by R. P. Porter; "Improvement of the Civil Service," by W. G. Rice; "Personal History of the Second Empire," XI, by Albert D. Vandam; "Notes and Comments," etc.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

Several of the articles in the November issue are among the very best contributions to literature of the year: "American Reliques of Tom Moore" is by Margaret M. Halvey; "Two Historic Churches," by Florence de Rothesay; "The Franciscan Revival," by Charles Robinson; "Mound-builders of America," by Marquis de Nadaillac; Joseph Miller contributes an essay on "The Money Question;" "Athletics in Catholic Colleges" is an illustrated symposium. There are also lighter sketches, poems, and editorials, and a variety of readable things in the Women and Children's Department.

REVIEW OF REVIEWS. Price, 25 cents; $2.50 per year. Review of Reviews Co., New York.

The special features of the November issue are: An account of "Louis Pasteur;" "Recent Progress of Italian Cities," by Albert Shaw; "Episcopacy's Sojourn in Minneapolis," by H. S. Hudson; "In the Field of International Sport," by Henry W. Lanier. There are the usual regular departments of "Progress of the World," "Records of Daily Events," "Recent History in Caricature," "Leading Articles of the Month," "Periodicals Reviewed," "New Books," etc.

ANNALES D'OCULISTIQUE. Price, 50 cents; $5.00 per year. The Transatlantic Publishing Co., New York.

The September issue presents a paper on "Hysterical Chromatism," by P. Pansier;

"The Statistics of Trachoma," by E. van Millengen; "Hydraulic Curetting of the Cornea," by Doctor Santarnecchi; "The Possibility of Seeing One's Own Lens," by A. Darier; "Interstitial Keratitis in Acquired Syphilis," by A. Trousseau; "Cystic Angeioma of the Orbit," by E. Valude; "Rare Complication after Extraction of the Crystalline Lens," by Doctor de Spéville. There are the usual Reports of Societies, Book Notices, and Miscellany.

THE METAPHYSICAL MAGAZINE. Price, 25 cents; $2 50 per year. Metaphysical Publishing Co., New York.

The November issue contains: "Initiation: The Self and the Selves," by Franz Hartmann, M.D.; "The Influence of Ideals," by Abby Morton Diaz; "Concentricity—the Law of Spiritual Development," by J. E. Hotchkiss; "Mythology and Being," by Professor C. H. A. Bjerregaard; "Cyril and Velma—A Story of Latter-Day Realism," by Frances A. Doughty; "The Reformatory Office of Mental Suggestion," by W. J. Colville. There are also the departments of Psychological Experiences, Editorial Comments, etc.

LIBRARY OF NATURAL HISTORY. By Richard Lydekker, B.A., F.R.S., F.Z S. Volume I, No. 5. July 1st, 1895. Paper; 8vo; pp. 94. Price, 50 cents. Frederick Warne & Co., New York.

The colored plates of this number represent respectively "A Tapir Attacked by a Jaguar" and "The Wild Cat." Chapter XIII, dealing with the cat tribe, is completed; the biographies include the jaguars, leopards, pumas, and all the numerous smaller cats—the marbled, golden, fishing, leopard, spotted, flat-headed, Egyptian, Indian-Desert, pampa, jungle, and wild and domestic cats; likewise the serval, ocelot, eyra, jaguarondi, margay, colocollo, and the lynxes.

Chapter XIV takes up the Civets, including the fossa, rasse, genets, linsangs, hemigales, binturong, cynogale, and the genus Herpestes (mungoose); also the aard wolf and hyenas.

This work contains the most complete enumeration of the *Felidæ* and *Viverridæ* that has ever been published.

ONLY A COMMONER. By Nat Gould. Paper; 16mo; pp. 283. Price, 50 cents. George Routledge & Sons (Ltd.), New York.

This is Volume I, No. 1, of the "Lafayette Library," and represents the will and push of the typical English yeoman both at home and abroad. The hero of the tale, and his father, by the machinations of an evil agent are obliged to leave the farm in England upon which their ancestors have lived for centuries, and make a new home in Tasmania. The agent likewise crops up with all his evil ways in Australia and Tasmania, and all parties are mixed up with the breeding of thoroughbred horses, and numerous interesting love episodes. The work is absolutely without a dull word from title page to finis; indeed, Routledge & Sons are noted for never publishing anything but superior classes of literature. The Lafayette Library should reach a wide circle of readers.

THE PHYSICIAN'S PERFECT CALL LIST AND RECORD. By Doctor G. Archie Stockwell, F.Z.S. Flexible morocco; long 16mo; pp. 200. Price, $1.50. George S. Davis, Detroit.

The fact this publication has reached its *tenth year* is sufficient evidence of its popularity and practical usefulness. Its paper and binding are alike superb. In size and shape it is by long odds the most convenient and the best of the "Visiting Lists;" moreover, it will not crumple or break down in the pocket.

A prominent feature is the absence of all advertisements and other "dead wood," and the extremely convenient arrangement of its most practical contents. Of the information afforded, that most demanded for ready reference is to be found upon the inside covers or on the fly-leaves. The posological information and dosage table are to a great extent new departures, being very thorough and complete.

Especially commendable is the obstetric table in two colors, and the arrangement for the concise keeping of all accounts, debit, credit, expense, profit and loss, loans, etc. No physician can afford to be without this work.

AN EPITOME OF THE NATIONAL FORMULARY. Compiled by the Louisville Botanical Club for the convenience of the medical profession. Flexible morocco; 24mo. R. H. Carothers, Louisville, Ky.

We particularly note the value this little book offers the medical profession. Its title sufficiently gives its scope, while its size is such that it may conveniently be carried in the pocket, and consequently is ready for reference at any moment. In no way can the hydra headed demon of quackery be better combated than by placing in the hands of every medical man a copy of this Epitome, and securing his pledge to prescribe the formulas therein outlined in preference to the

patent and proprietary preparations which are of the same class and character. Such a course will tend materially to relieve him from the thraldom of the proprietary ring, and likewise be of material financial benefit both to the dispenser and the patient.

We would ask the Louisville Botanical Club to place this little volume, through the medium of booksellers, in general circulation throughout the United States.

A System of Surgery. By Frederick S. Dennis, M.D., and John S. Billings, M.D. Volume I. Cloth; 8vo; pp. 880. Price, $6.00. Lea Brothers & Co., Philadelphia.

The first volume of the new System, with its list of authors, is ample assurance of the high character of the work. The opening chapter (136 pages), by Doctor Billings, deals with "The History of Surgery," the development of this branch of medical art during the last three thousand years being briefly given in chronological order, along with the chief discoverers, improvers, inventors, and teachers. The second chapter, devoted to "Surgical Pathology," including inflammation and the repair of wounds—the most thorough of its character that has been published for many years—is by William T. Councilman, of Harvard Medical School. William Welch contributes a most interesting chapter upon "The Bacteriology of Surgical Infections;" while "The Symptoms, Diagnosis and Treatment of Inflammation, including Abscesses, Ulcers, and Gangrene," is by Charles B. Nancrede, one of the best known of our surgical writers. "Septicæmia, Pyæmia and Poisoned Wounds" are treated of by W. H. Carmalt, of Yale; "Traumatic Fever, Erysipelas and Tetanus" is from the pen of J. Collins Warren, of Harvard Medical School —no one during the last decade has treated these subjects more completely. "Gunshot Wounds" is by P. S. Conner, "Fractures and Dislocations" by Frederick S. Dennis; "Anæsthesia," one of the best papers that has ever been published by any individual or in any tongue, is the result of the long experience of Horatio C. Wood. "Antiseptic and Aseptic Surgery" is by A. B. Gerster; "Operative Surgery" by Stephen Smith, who in this branch of medical science has few equals and no superiors.

Twentieth-Century Practice of Medicine. Edited by Thomas L. Stedman. Cloth; 8vo; pp. 640. Price, $5.00. William Wood & Co., New York.

The third volume of this series opens with a very complete monograph by Norman Kerr on "Alcoholism and Drug Habits"—a very timely contribution. This is followed by a chapter on "Shock and Collapse," by George F. Shrady, of New York. Albert L. Gihon, U.S. Navy, writes of "Seasickness, or Naupathia," "Heat Stroke," and "Frostbites." "Mountain Sickness" is by Georg von Liebig; "Osteomalacia," by W. T. Councilman; "Diseases of Occupation," by James H. Lloyd; "Vegetable Poisoning," by Beaumont Small, of Ottawa; "Metallic Poisoning," by James Stewart, of Montreal. There is likewise a very comprehensive index. This is a very admirable volume in that it treats of matters which heretofore have received but little, or at best imperfect, attention in general medical literature.

Transactions of the New York Academy of Medicine. Second Series; Volume X; paper; 8vo; pp. 686. Published by the Academy.

This volume far exceeds in merit the average of publications of its class; unfortunately for its usefulness, however, a majority of the contributions have already been embalmed in periodical literature. Among the chief contributors are Chas. McBurney, Allen Starr, the late Alfred Loomis, St. John Roosa, J. H. Dew, Charles E. Quimby, Beverly Robinson, T. H. Cheesman, Robert Abbe, D. W. Prentiss, Daniel Lewis, W. K. Morton, A. F. Currier, A. B. Judson, George W. Crary, W. H. Thomson, and T. R. Pooley.

The Medical News Visiting List. Seal; 32mo; pp. 192. Price, $1.25. Lea Brothers & Co., Philadelphia.

This list is had in three forms—weekly, monthly, and perpetual,—and has been thoroughly revised and brought up to date. Thirty-two pages are devoted to data useful to the practitioner; the remainder is made up of classified blanks arranged to hold records of all kinds of professional work, including memoranda and accounts. When desired, for twenty-five cents additional a ready reference thumb-letter index is furnished.

A Fifty-Cent Calendar Free.—The publishers of *The Youth's Companion* are sending free to the subscribers to the paper a handsome four-page Calendar, 7 × 10 inches, lithographed in nine colors. It is made up of four charming pictures, each pleasing in design, under each of which are the monthly calendars for the year 1896. The retail price of this Calendar is 50 cents.

New subscribers to *The Companion* will receive this beautiful Calendar free, and besides *The Companion* free every week until January 1, 1896. Also the Thanksgiving, Christmas and New Year's double numbers free, and *The Companion* fifty-two weeks, a full year to January 1, 1897. Address *The Youth's Companion*, 195 Columbus Ave., Boston.

Therapeutic Brevities.

Embalming Solution.—

℞ Solution zinc chloride (U. S. P.), 1 gallon.
Solution sodium chloride (six ounces to pint), 3 quarts.
Solution mercury bichloride (one ounce to pint) 4 pints.
Alcohol, 4 pints.
Carbolic acid (pure), 8 ounces.
Glycerin, 1½ pints.

Mix glycerin and carbolic acid, then all the other ingredients, when a clear solution of three gallons results, which is the proper amount for a body weighing 150 pounds.

This may be injected into the aorta, but it is much less trouble to inject into the brachial or femoral artery—or the femoral vein. An anatomical syringe is desirable, but a gravity apparatus that will answer all purposes may be improvised with rubber tubing, stop-cock, etc. A fluidrachm is sufficient to preserve each ounce of animal weight. For human bodies it is well to calculate two and a half fluidounces per pound weight.—Doctor H. R. Tilton, U. S. Army.

[We would inquire why the carotid artery should not be utilized for the purposes of injection, since it is as easily found as any other, and the results obtained are much more complete. The finding of the femoral vein in a corpse is not always practical, except in theory. Finally, if all this trouble is to be taken, a much more satisfactory fluid would be found in solution of Arsenite of Potash.—Ed.]

Rationale of Chloroform in Parturition.—In all literature there are not reported more than forty cases of death from Chloroform during labor. I have given every half-hour for from twenty to forty hours, without any trouble following; have seen a profound Chloroform operation in obstetrics, lasting for three or four hours, without grave effects. The alteration in the vaso-motor system of a pregnant woman enables her to resist the toxic action of Chloroform to this wonderful extent. Not only is its use in labor for the relief of pain alone justifiable, but it would be inhuman to withhold it. It is the anæsthetic of all others peculiarly adapted to parturition. It is applicable in any stage, in small quantities. To remove muscular rigidity of the cervix or perineum a larger quantity is required, until there follows complete muscular relaxation. Chloroform tends to prevent uterine contractions, only when given in large quantities. It does not tend to promote hæmorrhage, as has been claimed—that is to say, there is no greater tendency thereto after than without its use. I have given Chloroform in 1500 cases of labor without any ill-effects whatever following. But I deprecate the common careless use of this anæsthetic at any and all times.—Doctor J. E. D. Jones, in *Indian Medical Record.*

Penetrating Wounds of the Chest.—It is absolutely necessary to treat the wounded on the spot, owing to serious disadvantages arising from removal, however short the distance; hæmoptysis is especially apt to supervene through the shaking of the carriage. Syncope should be regarded, to a certain extent, as favoring hæmostasis; subcutaneous injections of caffeine or artificial serum are therefore preferable to ether, unless the depression is very considerable. Treatment by the ordinary means is not sufficiently efficacious if one does not at the very first subject the patient to as absolute immobility as can be obtained. The employment of sutures, ligatures, antisepticism, and methodic closure of the wound, which can be done with the minimum of movement, are permissible. If there is hæmothorax, there should, as a rule, be no haste in the matter of interference, still one must be guided by the symptoms and complications; resort should be had to paracentesis only when the effusion is very large and when dyspnœic phenomena give rise to anxiety. After the wound is cared for, unnecessary dressing of patient should be avoided, since such entails more or less shaking and movement.—*Quarterly Medical Journal.*

Bronchiectasis and Lung Gangrene Treated by Intra-pulmonary Injections.—Since 1878 I have adopted a method, suggested by Doctor Seifert in 1883, of treating cases of bronchiectasis and gangrene by intra pulmonary injections of Carbolic acid. After completely disinfecting the chest wall, a long needle attached to a Pravaz syringe containing Carbolic acid solution, three-per-cent., is thrust into the intercostal space over the cavity, and one or two cubic centimeters *slowly* injected. Usually the patients smell, at once, the carbolic, and have an attack of coughing, which is less the more slowly the injection is made. The needle is withdrawn and collodium applied. I have treated forty-three cases of bronchiectasis and seven of pulmonary gangrene in this way, and never seen any ill-effects; moreover, in all the cases of bronchiectasis the improvement was very great, both in the local malady and in the

general health. Even in the most severe cases of pulmonary gangrene the sputa became much less offensive and diminished in quantity, and in three of the milder circumscribed cases recovery followed in eight, eleven, and thirteen days, respectively.—ROKITANSKY, in *Gazette des Hôpitaux.*

Obstetric Aphorisms.—By observation and palpation, satisfy yourself that the patient is actually in labor:

Ascertain if bowels and bladder are empty; if not, empty them at once:

Make a digital and bimanual examination, determine presentation and relative size of head and birth-canal; if abnormal or difficult presentation, try to correct it:

Examine at regular intervals to see that the labor, if normal, remains so; if abnormal, to improve presentation if possible, and in either instance to note progress:

If, from failure of contractions after dilatation of os, from great size of head, small size of pelvis, or other causes, delay seems dangerous, apply forceps:

Protect perineum and if necessary retard extra rapid second stage:

Never allow the head to be retained long after delivery of body, in breech presentations:

Always examine placenta carefully, and if portions are, or even seem to be, detached, go after them at once:

Observe absolute cleanliness throughout. —E. T. BRADY, in *Virginia Medical Monthly.*

Strophanthus.—Strophanthus is a muscle poison; it only acts upon the heart as it acts upon the other muscles, but it so happens that the heart muscle is very susceptible to its influence — more than the voluntary muscles; and so in human medicine we are able to get the maximum stimulant effect on the heart before we get it on the other muscles. It is a drug, therefore, that acts directly as a stimulant to the heart muscle, increasing susceptibility and causing it to react more readily than normal. But there is no reason to think that, like digitalis, it acts further as a tonic as well as a stimulant. Then, again, the muscle of the arteries is acted upon by Strophanthus, and so contracts the arteries. It increases arterial pressure; it empties the veins and fills the arteries by stimulating the heart. It differs, I may say, in its action from digitalis, in being more distinctly diuretic; it is much more prompt than digitalis, acting at once; it is much less permanent than digitalis. All practical points. H. C. WOOD, in *Cleveland Medical Gazette.*

Caffeine in Diseases of Respiratory Organs.—Caffeine acts on the respiratory organs *directly* by inducing relaxation of bronchial spasm, and *indirectly* through its tonic action on the heart. It is to the first effect that I desire to direct special attention:

In my experience Caffeine holds first place in the treatment of spasmodic asthma. During the paroxysm five grains are ordered every nine hours until spasm is relieved, after which it is given at longer intervals to prevent a relapse. When the attack comes on fairly regularly every morning and evening, a dose of five or ten grains will often prevent it altogether, or render it so slight that the patient is able to sleep through it. Caffeine also relaxes the spasm which is frequently present in acute or chronic bronchitis and emphysema, and thus relieves dyspnœa in so far as it is due to this element. Physiology throws no light upon the mode of action of Caffeine in the conditions referred to: I have, however, never observed any ill-effects from its use, except occasional wakefulness.—MARKHAM SKERRITT, in *The Practitioner* (London).

External Use of Aconite Root.—The external use of Aconite root has been by me found very useful in relieving pain and subduing the swelling of the lymphatic glands, particularly those of the groins and axillæ. My mode of applying it is very simple. I get a root of Aconite and rub it with a little water on some stone. When the water becomes turbid I apply it on the swelling, and advise the patient to use dry fomentations in addition. Many cases have been thus relieved before their buboes were "ripe." A young man was suffering from sympathetic buboes of both groins, and on examination I found them very much swollen and painful. By application of the Aconite root, relief from pain was secured on the first day, and within a fortnight all the swelling subsided. The fomentation was carried out by means of a heated brick wrapped up in a piece of cloth. The native names for Aconite root are: *Mathia telia*, *Telia bikh* or *bish*, and the hill men of this place call it *Mohra.*—THANA RAM, in *Indian Medical Record.*

Cure for Dandruff.—Suffering much inconvenience from dandruff, and having resorted to many advertised nostrums and other means for relief, among which were various alcoholic solutions of castor oil, and washing the scalp with solutions of borax and carbonate of potassa—which latter, although effectual for the relief from the dandruff, seemed to im-

pair the vitality of the hair and cause it to become very sensibly thinner,—I was finally induced to try a preparation of an ounce of the flowers of Sulphur in a quart of water, as follows, with the happiest result: The Sulphur was repeatedly agitated in the water at intervals for a few hours, and the clear liquid then poured off; with this the head was saturated every morning. In a few weeks every trace of dandruff disappeared, and the hair became soft and glossy. After discontinuing the treatment for eighteen months, there is no return of the disease.—*Louisville Medical Monthly.*

Operation for Varicose Veins.—I have treated 164 cases of varices without a single failure, by means of hypodermatic injections, eight drops at a dose, into one of the principal varicose confluents, of a solution containing Iodine and Tannin, one and nine parts respectively; the operation is without anæsthesia, and repeated when necessary, during which the patient stands, a rubber tube having been placed at the root of the thigh. By this operation a hypertrophic phlebitis is brought on with thickening of the venous walls, and consequent resistance to dilatation. After operation the veins are compressed ten centimeters above and below the puncture, the limb wrapped in boric-acid cotton, and the patient kept rigorously on his back in bed. The possibility of embolism is purely theoretical and not borne out by facts. *Nice-Médical.*

Solvent for Sordes.—

℞ Boric acid, 30 grains.
Potassium chlorate, 20 grains.
Lemon-juice, 5 drachms.
Glycerin, 3 drachms.

When the teeth are well rubbed with this the sordes easily and quickly becomes detached; little harm will follow from the acid present. The boric acid attacks the masses of bacilli and bacteria, and the chlorate of potassium cools and soothes the membrane; the glycerin and lemon moisten the parts and aid the salivary secretion. — Doctor MacGregor, in *British Medical Journal.*

[Doctor MacGregor apparently takes no account of the chemical reaction between the potassium chlorate and the lemon-juice.—Ed.]

Calomel in Heart Disease. — Mercurous Chloride is indicated in dropsy due to heart disease, accompanied with icterus; in the absence of the latter it is contra-indicated:

It acts as a diuretic when given in laxative doses, in cycles of four days,—a diuretic effect is readily obtained on the fourth day and continues twenty-four hours after its withdrawal; but the dropsy may entirely disappear in five to ten hours:

The diuretic effect of Calomel is a secondary phenomenon; it first acts as a laxative:

With repeated four days' cycles, with laxative doses of Calomel and intermediate administration of cardiac remedies, it is possible to obtain substantial relief for a long time:

After a few such cycles the pericardium again responds to cardiac remedies.—Doctor Piasetski, in *Medeciniskoie Obozrenije.*

Black Haw in Abortion.—After employing in several cases, I find that, contrary to the generally accepted opinion, this remedy does not always prevent miscarriage; may sometimes even occasion, or at least often accelerate it when already begun. The hæmostatic action of the drug, however, was constantly observed, but in every instance after the first day uterine contractions followed, favoring the commenced abortion. In three cases, directly after the administration of a dose, contraction of the external os was observed. I therefore believe that although Viburnum may occupy a prominent place in the treatment of diseases peculiar to females, it is not without a degree of danger where there is threatened abortion. —Michailowa, in *Meditzinsksje Obozrenije.*

Painless Injection of Hydrocele.—Puncture with a trocar, permit about a third of the fluid to flow off, then inject three to four cubic centimeters of a one-per-cent. watery solution of cocaine through the cannula; gently knead the sac four or five minutes, following which the remaining fluid may be allowed to flow out. Tincture of iodine, either pure or mixed with one-third water, according to the character of the hydrocele, may now be injected; the sac is again gently kneaded, and at the expiration of four or five minutes the iodine drawn off. In this manner the operation is absolutely painless and the danger of cocaine poisoning practically *nil.*—Nicaise, in *Wiener Medicinische Presse.*

Triticum Repens.—Couch Grass is an old remedy, and can be relied upon in its limited field of action. Where there is bloody urine, with no pain or soreness to indicate the exact location, and where exercise decreases the amount of blood, it proves most satisfactory; it is also frequently beneficial in cases of strangury and irritation. The infusion is ap-

parently the most effective form for prescribing, but where this is inconvenient the fluid extract in doses of one to ten drops, well diluted and administered every hour or oftener, will perhaps answer as well. This old remedy deserves a trial at the hands of the younger physicians.—*Eclectic Medical Journal.*

Quinine in Corneal Ulceration.—One of the most noted London ophthalmic surgeons, an original thinker and positive prescriber, recommended most strongly—entirely supplanting iodoform in the local treatment of corneal ulceration during diphtheritic conjunctivitis and severe ophthalmia—a lotion composed of three to four grains of Quinine to the ounce of water; the salt is dissolved in the smallest amount of sulphuric acid, the water being subsequently added. During the bad form of the disease he employs as "eye-drops" and applies compresses saturated with the same to the lids.—*Medical Review.*

Uselessness of the Vaginal Douche.—The douche in normal labor cases is apparently useless, for in 407 such where it was not used the mortality was 5.6 per cent., while in 400 other cases in which it was employed the death-rate rose to thirteen per cent. In another series of 800 cases, only eighty-four per cent. of those who received the douche never had a temperature over 98° F., while of those who were let alone over ninety per cent. passed the puerperium free from fever.—Leopold, in *Archiv für Gynaekologie.*

Chloral as a Vesicant.—Put finely powdered Chloral hydrate in the centre of a piece of adhesive plaster, taking care to leave an uncovered margin. Now heat the plaster until the Chloral is melted, and apply to the previously oiled skin. In from ten to fifteen minutes a large blister will be formed, with only a slight burning sensation. The Chloral should not be allowed to remain in contact with the skin longer than fifteen minutes, since there is then danger of inducing ulceration.—Doctor Ivanobski.

Hypertrophy of the Prostate.—Intra-testicular injections of Cocaine twice a week will reduce the volume of the hypertrophied prostate, thus completely replacing castration. In patients thus treated, the symptoms attendant upon prostatic hypertrophy rapidly disappeared; the gland gradually decreased in size; the final result was complete and lasting cure, with retention of potency but complete absence of spermatozoa.—*La Semaine Médicale.*

Varicose Veins.—Pulsatilla is often of benefit in the treatment of varicosities, inasmuch as it acts upon the vascular system, and above all relaxes the right side of the heart, the veins and the capillaries. Witch Hazel much resembles Pulsatilla in this respect, and sometimes is even more beneficial; it causes dilatation of the blood vessels with blood stasis and sequences.—Doctor Mossa, in *Allgemeine Homœopathische Zeitung.*

Cajeput Oil in Pneumonia.—Cajeput oil is of great value in asthenic pneumonia. As a cardiac stimulant it is as powerful and as quick in action as either alcohol or ether, and like them relieves the heart by dilating the systemic arterioles; but, unlike them, it does not diminish the sensitiveness of the respiratory centre.—Doctor Foy, in *Medical Press and Circular.*

Ringworm of the Beard.—

℞ Oil of cade, 1 drachm.
Red oxide of mercury, 12 grains.
Ammoniated mercury, 45 grains.
Sublimed sulphur, 20 grains.
Simple cerate, 1 ounce.

Use this ointment morning and night.

—*Quarterly Medical Journal.*

Iodine in Dermatology.—Doctor Comby, of Paris, derives good results from the topical use of Iodine tincture in ringworm, circumscribed alopecia, and tinea versicolor; also in ulcerated stomatitis, fungus gum, and various chronic anginas; painting the affected area is an efficacious procedure, attended by no inconvenience.—*Medical Standard.*

Blennorrhagic Vaginitis.—

Pure creosote, 3 parts.
Solution of potassium hydrate, 3 parts.
Camphorated water, 240 parts.

Two dessertspoonfuls are injected two or three times a day into the vagina.—*Quarterly Medical Journal.*

Acne Rosacea.—Doctor Cantrell freezes the part with rhigolene or ethyl chloride, then freely scarifies with a five-bladed knife. He believes this the best treatment, and asserts it gives prompt relief.—*Medical World.*

Medical Progress.

THE PARABLE OF THE FEATHER BED.—One morning the thrifty farmer's busy wife completed a very important event—the picking of her geese. She was gratified to find that this picking added to previous pickings would give her that which she had long desired—feathers enough for a new bed. A few days later the tick was prepared, stuffed, and then placed on the bedstead in the "spare" room, where it was occasionally used by a passing guest.

The time for the housewife's accouchement approaching, it was decided that she should have the new bed. When she was taken with labor she lay upon this bed and gave birth to her child, and, notwithstanding the ordinary precaution to prevent soiling, some amniotic fluid and blood filtered through into the feathers.

Mrs. W. did not "do well;" she was confined to bed much longer than usual, and there was an offensive vaginal discharge which also percolated, at times, into the feathers. She, however, finally recovered, and the new feather bed was externally cleansed and placed on the fence "to air," a process that occupied one day, and then placed on the family couch for husband, wife, and baby.

Hot months again came around. The husband, after working hard all day in the fields, would lie down early, dispensing with the bath, and his perspiration, which was profuse and strong, would be absorbed by the bed, together with that of the wife; the baby, which had grown and waxed strong, would also add his mite in the shape of urine and occasionally a thin fæcal discharge. During this time the feather bed would be cleansed and aired frequently, for Mrs. W. was a foe to dirt—her shining pots and pans and her scrupulously clean kitchen being *prima facie* evidence of her cleanliness.

Time passed on, and diphtheria made its appearance in the neighborhood. The W. children were attacked; as they were taken they were in succession placed in the family bed. Farmer W.'s children were subsequently "sickly;" the mother said "it seemed like her children took every disease going around, and still they had been in no place to catch it." Finally one of the children took down with phthisis and died, and in course of time another was attacked with the same disease.

And now it became necessary to summon a new doctor, whose first measure was to inspect the premises and learn their sanitary condition. He seemed to be struck with the frequency with which the feather bed appeared in the more recent troubles; he inquired if it had been cleansed, when Mrs. W. replied, with pardonable pride, that it had been "stirred and aired" frequently, and "although there were stains upon the outer covering they were indelible, for she scrubbed them often." Upon request, permission was granted the doctor to examine the interior. Thereupon, with a knife he ripped the tick open and to the astonished gaze of Mrs. W. displayed, despite the superficial cleansing and "airing" the bed had received, a glutinous mass of mouldy, stinking feathers, in the lower parts of which were vile, slimy vermin, and in one corner a nest of roaches. "Here," said he, "is the cause of the sickness and death with which you have been afflicted in the past. This festering mass is not of recent origin, but is the result of months and years of accumulated filth filtering through, little by little, at various times." . . .

That evening Farmer W. built a fire in the pasture lot back of the barn, and there was a cremation of feather bed, filth, slime, bugs and all, and from that day feather beds were banished from that house, and sickness brooded no longer over that family.—LYMAN WATKINS, in *Eclectic Medical Journal.*

THE COLD BATH IN THE PNEUMONIA OF CHILDREN.—Excellent effects are yielded by balneotherapy in the pneumonia of quite young infants. Applied at a temperature of 25° or 20° C., according to age and circumstances, the cold bath is most serviceable in reducing temperature, restoring lost tone, and slowing the pulse and respiration. Chemical antithermic agents, such as acetanilid and its ilk, are generally useless and may be dangerous. In my wards I give cold baths to all my little pneumonic patients whose temperature exceeds 102.2° F. and whose hearts are not diseased. Quite recently I had an opportunity to note the good effects of this treatment in a little boy affected with influenzal pneumonia of the right apex, uninfluenced by ordinary antithermic drugs. Baths at 25° C. are quite well supported by even very young infants. The application of this method determines the onset of the crisis on the fifth instead of the seventh day, and so materially shortens the duration of the disease; it is, moreover, the best means of obtaining prompt defervescence in the pneumonia of adults. At the Aubervilliers fever hospital M. Siredey has derived great advantage from the employment of cold baths in the treatment of broncho-pneumonia consecutive to specific fevers; and M. LeGendre corroborates their efficacy in all congestive

complications of eruptive fevers. Hayem declares that at the Hospital St. Antoine the most fatal disease of all is pneumonia, and that eighteen out of twenty of these patients are "alcoholics." During the first two years (1879–1880) of his physicianship at that hospital the death-rate was fifty per cent.; but with the institution of the cold-bath treatment the mortality fell to twenty-seven or twenty-eight per cent., and for some time past this mortality has further diminished to eight or ten per cent., an improvement ascribed to a new treatment especially devised for the benefit of alcoholics. Employed in the *crèche* attached to his wards, Professor Hayem finds the cold baths more powerful for good against pneumonia than when used for adults.—M. Comby, in *The Lancet* (London).

The Walscher Position for Labor.—It has long been known that there is a certain amount of mobility in the joints of the pelvis, especially during pregnancy. But it remained for Walscher (1889) to show that the antero-posterior diameter of the pelvic inlet varies with the position of the body. The sacro-iliac synchondroses are true joints with synovial membranes, articular cartilages, and strong supporting ligaments. The innominate bones revolve to a limited extent about the sacrum, upon an axis passing through the sacrum several centimeters below the level of its promontory, and Walscher found that when the pelvis is, as it were, extended, the conjugata vera is from nine to fifteen millimeters longer than when flexed upon the trunk. The universal position of a woman, when forceps are applied, has been upon the back or side, with the thighs flexed upon the abdomen; in this position the symphysis pubis approaches the promontory of the sacrum, and the true conjugate of the pelvic inlet is shortened six or seven millimeters. On the other hand, if the thighs are forcibly extended, with the patient upon her back and her lower extremities hanging down over the edge of a table or bed, considerable traction is exerted upon the anterior portion of the pelvis; it is forcibly extended, and the conjugata vera is lengthened six to eight millimeters. The increase in length, therefore, of the antero-posterior diameter of the pelvic inlet in the Walscher position over that in the position universally assumed, is from one to one-and-a-half centimeters. By placing women in this position in the first stage of labor, Fehling and others have secured spontaneous births in cases where forceps or other instrumental means had been necessary in previous labors. It must be borne in mind, however, that the Walscher position is of value only when the head is at the superior strait; after a head has entered the pelvic cavity this position should be dispensed with, as by the sinking in of the lower end of the sacrum and coccyx the antero-posterior diameter of the pelvic outlet is shortened.—*American Gynecological and Obstetrical Journal.*

Bacteriological Diagnosis of Diphtheria.—To procure this, the physician must collect on a cotton swab some of the discharge from the throat of a suspected patient, put the cotton in a sterilized glass tube, and mail to a bacteriologist. The latter examines with a microscope, and notifies the doctor if he finds the Klebs-Loeffler bacillus, and then the doctor isolates the patient, placards the house, and alarms the neighborhood. Next the bacteriologist proceeds to make "cultures" with which he inoculates a guinea-pig; if the pig sickens, the specimen is suspicious, and if it dies in seven days this is proof positive that the case is true diphtheria, and the doctor is so notified. But if the guinea-pig does not sicken in a few days, the case is not diphtheria, and the doctor may remove the placard and record the case as anything he pleases—his professional standing having been duly humbled and that of the bacteriologist glorified.

These steps will have occupied from five to ten days, according to speed of mail carriage, supply of guinea-pigs, and leisure of the experimentor. By the time the doctor receives this costly diagnosis, the case will be so far advanced that any fool could diagnose it accurately; yet this slow bacteriological process is lauded as satisfying the need of an early diagnosis. Heaven save the mark, and save the patient also; for, were the case diphtheria, it would either be well, or beyond hope, or dead, before the doctor got the diagnosis from the "scientist."

Yet, to sustain this pretentious fad, an educated profession is asked to abnegate its own intelligence, and the public purse is drawn on to support expensive officers, mostly of foreign origin, who are of no practical use beyond drawing their salary.—Doctor W. H. Cook, in *Medical Brief.*

Sexual Anomalies in Women.—Novak, of Christiania, states that independent of impotency and sterility there exists an absence of volupty but little discussed by gynæcologists, although it may produce serious results in married life. There is a distinction be-

tween sexual instinct and the sense of the sexual orgasm. Sexual instinct depends upon psychical impressions reflected to the genital organs; while sexual feeling produced by a local irritation of the genitals has much less intensity. Want of sexual feeling is usually due to some central nervous system trouble. It may be absent in a woman in whom the sexual organs are perfectly normal, or in cases of congenital or acquired malformation, especially where the clitoris is absent. Sexual feeling may be present or absent in absolute amenorrhœa. Congenital absence of sexual feeling is comparatively rare; the trouble is acquired much more frequently than is usually believed; it is seen especially in the newly married and in hysterical individuals. Contrary to the ordinary opinion, hysterical people do not, as a rule, have strong sexual feeling, although they are very desirous of attention from the other sex. Intense brain-work and violent emotion which depress the individual exert a depressing effect on the volupty. The same is true of continuous sedentary employment, too rich food, and too great obesity. Inability to enjoy the sexual orgasm has the following causes: Psychical—want of personal sympathy with the man: Excessive masturbation: Abnormalities in the woman whereby the sexual act produces painful congestion of the genital organs, and the normal relaxation does not take place: Exhaustion of the central nervous system from sexual excesses: Finally, painful genital condition. Treatment for most cases is, absolute continence; the exhausted nerve centres should not be excited by the imagination. Temporary separation from the husband is most important. Tonic and quieting drugs can be used.—*National Medical Review.*

Electric-Current Accidents.—When a person meets with an accident due to contact with electric conductors or generators, the contact must first be broken, if it still exists, as otherwise those who come to render assistance may also become victims:

The sufferer should be carried to a well ventilated room, from which all persons except, at the most, three or four assistants, are excluded:

Loosen the clothing at once, and at the earliest possible moment make an effort to re-establish respiration and circulation. To restore respiration, recourse should be had to rhythmical traction on the tongue, and artificial respiration, but both must be continued for a sufficiently long time: the circulation should at the same time be stimulated by rubbing of the skin, flagellation of the trunk with the hand or wet towels, and any other means usually resorted to in such cases.—Professor Gariel, in *American Medico-Surgical Bulletin.*

Latent Aneurysm of the Aorta.—A new and distinguishing sign is the presence of a systolic sound in the brachial artery, synchronous with the cardiac systole, and sometimes accompanied by an arterial murmur; when it can be heard, and aortic regurgitation excluded, a positive diagnosis of aneurysm can be made, even in the absence of all other signs or symptoms. The sound is due to the rapid tension of the walls of the only partially filled artery, due to the sudden impact of blood at the heart's systole. In pure aortic regurgitation the sign is always present. In two out of six cases I was able to diagnose aneurysm, from this sign alone, four months before the appearance of the recognized physical signs.—Doctor W. G. Glasgow, in *New York Medical Journal.*

Glucose as Food.—It appears to have been generally accepted that commercial glucose is suitable for food. This opinion was promulgated some years ago by American chemists, and has been made the basis for justification of much substitution and adulteration. Mere chemical knowledge, or even experiments on the lower animals or healthy subjects for a brief period, are not sufficient to establish the harmlessness of a substitute food. Glucose made from starch by the action of acid is not the same as the product of digestion by animal ferments, and it is not likely that it will be a satisfactory substitute for the forms of sugar that arise in the process of normal digestion.—E. H. Bartley, in *New York Medical Journal.*

A New Operation for Glaucoma.—A very narrow knife, with cutting edge downward, is introduced in the sclero-corneal margin in the inferior angle of the anterior chamber, passed horizontally across the anterior chamber parallel to the iris, and brought out through the sclerotic. The blade is then turned on its axis ninety degrees, with the edge toward the iris, and thus makes in the sclerotic an incision perpendicular to the first, when the aqueous humor at once pours out. The blade is now rapidly withdrawn, and the iris divided at its peripheral attachment throughout the length of the wound.—Niccati, in *Revue d'Oculistique.*

The Medical Age.

Vol. XIII. DETROIT, DECEMBER 10th, 1895. No. 23.

Original Articles.

THE GERM THEORY OF DISEASE.

BY C. W. CRAM, M.D.

As the microbe doctrine, or germ theory of disease, has many honest adherents, I propose, for their benefit, to lay bare some of the unfounded pretentions of its authors. My warrant for this is in the fact that human life is too sacred, and the unselfish intelligence of our time too critical, to tolerate error where health and life interests are at stake.

At the outset I wish to point out the pressing need of accurate knowledge of the *nature* of disease and of *scientific means for its cure*, in the department of practical medicine. It is here, in the shadow of diphtheria and tuberculosis, that bacteriology has its chief wallow. In this department the real nature of disease has never been taught. It has been a profound mystery, and as a result we have a half-dozen schools of medicine all holding views at variance with each other, either as to the nature or as to the treatment of disease, or both. The result of this dense ignorance of the nature of disease, and the administration of powerful drugs without scientific guidance, is a heavy death-rate that puts the conscientious physician to the blush, especially as this death-rate does not occur in surgery, nor in the department of obstetrics.—Out of one hundred deaths, not of the aged, ninety-five are in the department of practical medicine. Surgery presents grand results because it has a basis for scientific work. Its diseases are well known; they can be seen, understood, manipulated, and cured. So in obstetrics the conditions are well known, and this department is taught in our medical colleges as a matter of absolute science. But *practical medicine* has been in the "slough of despond" for more than 2000 years.

Up to a very recent period it was taught that medical diseases were of the blood: diphtheria was a blood disease, and so was typhoid fever. We now know that this old theory, that was taught for fully 2300 years, was erroneous. The error in the theory of disease led directly to the adoption of principles of practice that were pernicious and deadly. But, mark you, the theory, though false, was on the right line, inasmuch as it had reference to *disease itself*, not the cause.

Now look at the sad spectacle presented by the germ theory. When teachers broke their hold on the old blood-theory, and turned their backs upon blood-letting, roasting, starving and salivating their patients, they tacitly admitted that medical practice had always been in the deepest of deep mud, and that their pretended knowledge of disease had been all sham. Their teaching upon the nature of disease had been mere twaddle. Thus situated, they were too much dazed to contemplate disease with a view to offer a theory as to its real nature; they did not observe the bright light that physiology was throwing upon the subject. They did not hear the voice nor feel the impulse that came throbbing up from the previous century, declaring that Hoffmann, Cullen and Erasmus Darwin were pointing to the nervous system as the guide in medical practice; nor did they see, all about them in clear-cut letters of light, this truth-giving dispensation of *vivisection:* "As anatomy is to surgery, so is physiology to practical medicine. Pathology is deranged physiology. Reinstate physiology, and restore your patient to health." They saw none of it.

However, a will-o'-the-wisp came sailing over the turbid waters, and, like a true bacteriologist, dropped the inspiring legend: "Disease? No matter what it is, the microbe caused it. Kill the microbe."

The professors saw it, and took it in; dis-

cussed it for three minutes—adopted it—hugged it to their bosoms, and, as the germ theory sprouted, they drifted ashore and planted it.

But it was a weak sapling until the agents of *'ines* came to water it with the riches of the German chemists. Then it grew apace, and is now a growth that casts a dark and dangerous shadow over the people.

> As money makes the mare go,
> So does it make the sapling grow.

But what of the fruit of this tree? Can it be other than deadly? Is ætiology to be the goal of medical research? Is the morbid anatomy that invites death to be dissipated by the phantom of an exciting cause? Think for a moment of the supreme absurdity of giving the cause, that starts unseen and by chance, a mountain-like prominence over the grim disease that enters the human body to kill by a death process that science can uncover and defy! Who, caught in the whirl of a tornado, will sit down calmly to investigate its origin? What surgeon, called to dress an incised wound, would pause to know whether it was caused by the slash of a razor or the thrust of a knife?

The sheer folly of putting the cart before the horse has been universally condemned by all sane men; yet this is the offering of bacteriology to the medical profession of the day, and this alone should bar the acceptance of the germ theory. Not only do bacteriologists perform this foolish act when they magnify the importance of the exciting cause, but they repeat it when they make their claim that microbes produce disease. All admit that the germs exist in connection with disease, *but the disease precedes them.* They are harmless scavengers feeding upon the debris of morbid tissues or deranged secretions. Belonging to the *protistæ* of Haeckel, they are on the same level as elementary cells, and cannot sustain life by feeding upon vitalized tissues; it is only in the devitalized elements of decay and rottenness that they are able to sustain their low form of life; and this has been admitted by all leading advocates of the germ theory; and finally the claim that the microbe *per se* causes the disease has been abandoned, and a *ptomaine*, for which the microbe is held responsible, is substituted as the cause.

That these germ-theory advocates were compelled to change their claim before its existence had numbered a dozen years, is fatal to the domination of their present claim, for it is clearly more untenable than the first. As their whole structure rests upon assumption in two diseases—diphtheria and pulmonary tuberculosis — it must fall ignominiously unless clearly sustained at these two points. That it will not be so sustained is clear because:

The fact that some cases of diphtheria die before a false membrane is formed is proof that death did not, in such cases, occur from either bacillus or ptomaine in connection with false membrane:

Where the membrane, with its so-called pathogenic bacillus, exists, the pathological fact of irritation, congestion, and inflammation, at the site of the membrane, always precedes it and its bacillus.—So neither bacillus nor ptomaine is at the inception to inspire the morbid process; and death, if it occurs, is wholly unaccounted for by the germ theory. This holds in all cases of diphtheria:

The animal chemistry of the body, as well as the throat pathology, shuts out the germ theory not only in diphtheria, but in *all epidemic diseases.*

All medicines and poisons not only invade the domain of animal chemistry, but each has an action characteristic of itself. The effect of prussic acid and ammonia is seen almost instantly on being administered, while it requires about five hours to obtain the maximum effect of quinine and digitalis. Upon this range as to acute effect come all the poisons, without exception, the ever-prevailing process that presents the effect being the work of the organic laws of assimilation and disassimilation in the animal chemistry of the body. This fact absolutely shuts out all ætiological claim for the ptomaine of the bacillus, for if such poison existed it must of necessity, to produce disease, enter the blood current from the stomach, or from the lungs, or by absorption from the alimentary tract, and conform to the organic laws to which I have referred. That nothing of the kind occurs may be seen in the *incubation* of the diphtheria, and all epidemic disease poison, *the period for this*

process extending from three to ten days. Here the important fact is disclosed that the ætiological poison of the epidemics, whatever it may be, does not circulate through the body and do its toxic work by way of the blood.

Now the logical conclusion follows that the special poison of diphtheria performs its deadly work through some channel not yet demonstrated in connection with disease. In this connection it is necessary to exercise a little thought. Let us call up the history of the epidemic diseases, and carefully view the symptoms as seen in the pathology of the cases. What do we see? The clear proof that all of the primary symptoms declare the involvement of the central nervous system.—And this holds good in typhoid fever as well as the epidemics. In studying the exanthematous maladies, we observe that the eruption first appears on the fauces, then on the forehead, face, neck, body, and lower limbs, about two days being occupied in this extension of the eruption from the fauces to the feet. Here we not only have proof that the poison of the epidemics assails the nervous system, but that the several poisons that stand in a causative relation to the eruptive diseases are directed to the organic system of nerves, the morbid involvement extending downward along the line of the ganglia, not through the spinal cord. Primarily the blood is not in the least involved. The origin of the eruption on the fauces and face proves that the ganglia at the base of the brain are first involved. How? Possibly the poison reaches the medulla oblongata and the basal ganglia through the olfactory nerve, which is, through night as well as day, exposed to the poisonous gases and irritating particles of matter that are afloat in the atmosphere. It is possible, too, that the poison enters the taste-bulbs and passes to the medulla through the glosso-pharyngeal nerve. However, in the case of diphtheria it must be remembered that the sub-maxillary gland is generally involved and much swollen; that this gland has nerve supply from the lingual, and from the chorda tympani, a branch of the facial, both of which supply nerve-filaments to the anterior three-fourths of the tongue. This fact, coupled with the involvement of the sub-maxillary gland, indicates that the poison of diphtheria first attacks the tongue filaments of the lingual nerve and the chorda tympani.

It is believed that the impediment that bars the air from the nerve substance of the olfactory, glosso-pharyngeal, chorda-tympani and lingual nerves, is no greater than that which bars the air from the blood in the lungs. Yet gases other than oxygen and carbonic acid pass the lung barrier and threaten—and at times destroy—the life of the body. Among the deadly gases that attack the blood from the lungs, is carbonic oxide, which, according to Landois, not only displaces the oxygen from the red globules, but prevents the elimination of carbonic acid.

As the object of this article is to exhibit the falsity, as well as the absurdity, of the germ-theory, and not to present a new one in its place, I will now proceed to add to the evidence on the lines already laid down. I have called attention to the fact that the animal chemistry, as well as pathology, of the body, gives overwhelming evidence against the germ theory. I will now point to the fact that all the analogies seen in normal animal life, as well as in disease, are opposed to it.

Fishes live in water as microbes live in the morbid secretions of the body; but the fishes did not produce the water, were not an exciting cause in its production, and do not poison the water by ptomaines, either of secretion or excretion. So pinworms, round worms, tapeworms, etc., live and revel in the secretions and excretions of the intestinal canal, but are not an exciting cause of the secretions and excretions, nor do they cause any disease by ptomaine or by irritation of the nervous system; and yet, while no special disease follows, it is probable that one tapeworm creates more disturbance in the organism of the body than a billion of microbes.

Now let us look at disease itself. What is it, as we see it on the line of practical medicine? Here the bacteriologist is dumb! Yet it is apparent that a physician must have a clear conception of the nature of disease if he is to judge accurately of its cause.

Man is an organism governed by special laws that nature has adapted to his needs,—laws that relate either to his organic or to his animal life, or in other words to life action that is normal. This is physiology. Violate

these laws, or, in other words, derange physiological processes, and we have disease.

In practical medicine it is always the case that disease is a matter of deranged physiology, as surgery is of broken or deranged anatomy. Accepting this as a matter of fact, the much-talked-of exciting cause of disease becomes a myth as to importance, while disease itself is made clear, and its treatment brought into the domain of absolute science where the death-rate can be reduced to a point as low as in surgery. To prove that the exciting cause of disease can be wholly ignored, I will first call up surgery, where science has always had an abiding place.

Let us suppose a case of compound fracture of both bones of the leg; it is a more serious affair than prostration by fever, in case the physician knows what fever is and puts its treatment on a physiological basis. But is any attention paid the *exciting cause?* No. Ordinarily it makes no difference whether the fracture came from the kick of a mule, a fall from a buggy, or collision with a bicycle; the surgeon immediately proceeds to cleanse the laceration, secure coaptation of broken bone, and apply splints. Now mark that in the coaptation of the fragments of bone he has restored the normal form and position of the bones as levers in the animal economy of the body, and has thereby removed the *proximate* cause which stood sponsor for the morbid anatomy of the soft tissues and the shock to the nervous system.

Again, a man is prostrate and insensible from fracture of skull and depression of fragment of bone. The exciting cause—a blow from a club—cuts no figure at all in the surgery of the case; but the *proximate* cause, seen in the depression of bone, is the dangerous factor and must be removed. So it is when a man has a hard fall, striking upon his shoulder and producing a dislocation. The fall is the exciting cause, but no attention is paid to it. The *proximate* cause, however, is seen in the dislocation, and this is removed by replacing the bone; here we can see that the proximate cause is the disease itself.—This is generally, if not always, the case. We call it the proximate cause because it stands in direct and close relation to the morbid anatomy resulting from it.

Now turn to practical medicine, where we have the acute, epidemic, and chronic diseases to be treated medically. Here, as in surgery, the exciting cause is not essential; it strikes, and goes, and is lost sight of. No matter if this cause exist in the damp atmosphere that gives a common cold, or in the cold blast that freezes, or in the intense heat of summer that roasts, and fills our graveyards with the victims of cholera morbus; it is all the same—we have no control in the premises. The same is true of the exciting cause in the epidemics. If we could know positively that all these, and even the chronic diseases, were produced by microbes, it would be of no benefit whatever as to the treatment.

The two things to know are: What is disease? And, how can it be successfully treated? Having possession of the knowledge that these two questions imply, we are masters of the situation. Knowing that the *proximate* cause exists, and that it represents deranged physiology in which there is a restriction of nerve force, we must restore the physiology and thereby remove the disease. The means for doing this are as accessible and as easy of application as are the surgical means for the treatment of fractures, and they are as accurate and scientific.

Here the question may come: Why is it that the physiological basis for the treatment of disease has not been taught in our medical colleges? The reason is that the empirical sect, 2300 years ago, attempted to strangle physiology in its infancy; and they nearly succeeded. Dunglison, in his History of Medicine, tells us that the dogmatists, or followers of Hippocrates, never would forgive the empirics for their opposition to the study of anatomy and physiology. The latter branch has never fully recovered from that opposition, and it never will if the germ theory holds sway, for our leading bacteriologists are clearly the lineal descendants of the empirical charlatans.

But the world moves. Progress is on the wing. Prominent physicians and medical journals are renouncing the microbe fallacy, and the time is not far distant when the advocates of physiological practice will have their inning for scientific work. Then the medical profession will have a basis for the accurate administration of medicine.

Davenport, Iowa.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S. ARMY.

(*Continued from page 689.*)

Owing to the opposition of the General-in-Chief, no further steps were taken in this direction at this time. In the meantime the medical officers in the field had been compelled to devise the best means they could for the immediate care of the wounded after battle. At the suggestion of Medical-Director Tripler, the following order was issued in the Army of the Potomac on October 3d, 1861:

HEADQUARTERS ARMY OF THE POTOMAC,
WASHINGTON, Oct. 3, 1861.

GENERAL ORDER No. 20.

. . . . . .

6. The hospital attendants, to the number of ten men to the regiment, and the regimental bands, will be assembled under the supervision of the brigade surgeons, and will be drilled one hour each day, except Sunday, by regimental medical officers, in setting up and dismantling the hand-stretchers, litters, and ambulances; in handling men carefully; placing them upon the litters and ambulance beds; putting them into the ambulances, taking them out, etc.; carrying men upon the hand-stretchers (observing that the leading bearer steps off with the *left* foot, and the rear bearer with the *right*); in short, in everything that can render this service effective and the most comfortable for the wounded who are to be transported.

. . . . . .

By command of Major-General McClellan.
(Signed) S. WILLIAMS,
Assistant Adjutant-General.

Similar plans were adopted in other armies, but the first and most complete ambulance system was that established in August, 1862, at the instance of Surgeon Jonathan Letterman, U. S. A., Medical Director of the Army of the Potomac.

The plan is clearly set forth in the accompanying order:

HEADQUARTERS ARMY OF THE POTOMAC,
Camp near Harrison's Landing, Va.,
August 2, 1862.

GENERAL ORDER No. 147.

The following regulations for the organization of the Ambulance Corps and the management of ambulance trains are published for the information and government of all concerned.

Commanders of army corps will see that they are carried into effect without delay:

1. The ambulance corps will be organized on the basis of a captain to each army corps as the commandant of the ambulance corps, a first lieutenant for a division, second lieutenant for a brigade, and a sergeant for each regiment.

2. The allowance of ambulances and transport carts will be: One transport cart, one 4-horse and two 2-horse ambulances, for a regiment; one 2-horse ambulance for each battery of artillery; and two 2-horse ambulances for the headquarters of each army corps. Each ambulance will be provided with two stretchers.

3. The privates of the ambulance corps will consist of two men and a driver to each ambulance, and one driver to each transport cart.

4. The captain is the commander of all the ambulances and transport carts in the army corps, under the direction of the Medical Director. He will pay special attention to the condition of the ambulances, horses, harness, etc., requiring daily inspections to be made by the commanders of division ambulances, and reports thereof to be made to him by these officers. He will make a personal inspection once a week of all the ambulances, transport carts, horses, harness, etc., whether they have been used for any other purpose than the transportation of the sick or wounded, and medical supplies; reports of which will be transmitted through the Medical Director of the Army Corps to the Medical Director of the Army every Sunday morning. He will institute a drill in his corps, instructing his men in the most easy and expeditious method of putting men in and taking them out of the ambulances, taking men from the ground and placing and carrying them on stretchers, observing that the front man steps off with the left foot and the rear man with the right, etc. He will be especially careful that the ambulances and transport carts are at all times in order, provided with attendants, drivers, horses, etc., and the keg daily rinsed and filled with fresh water, that he may be able to move at any moment. Previous to and in time of action he will receive from the Medical Director of the Army Corps his orders for the distribution of the ambulances, and the points to which he will carry the wounded, using the light two-horse ambulances for bringing men from the field, and the four-horse ones for carrying those already attended to farther to the rear, if the Medical Director considers it necessary. He

will give his personal attention to the removal of the sick and wounded from the field and to and from the hospitals, going from point to point to ascertain what may be wanted, and to see that his subordinates (for whose conduct he will be responsible) attend to their duties in taking care of the wounded, treating them with gentleness and care, and removing them as quickly as possible to the places pointed out; and that the ambulances reach their destination. He will make a full and detailed report after every action and march, of the operations of the ambulance corps.

5. The first lieutenant assigned to the ambulance corps of a division will have complete control, under the commander of the whole corps and the Medical Director, of all the ambulances, transport carts, ambulance horses, etc., in the division. He will be the acting assistant quartermaster for the division ambulance corps, and will receipt and be responsible for the property belonging to it, and be held responsible for any deficiencies in ambulances, transport carts, horses, harness, etc., pertaining to the ambulance corps of the division. He will have a traveling cavalry forge, a blacksmith, and a saddler, who will be under his orders, to enable him to keep his train in order. He will receive a daily inspection report of all the ambulances, horses, etc., under his charge, from the officer in charge of brigade ambulance corps, will see that the subordinates attend strictly to their duties at all times, and will inspect the corps under his charge once a week; a report of which inspection he will transmit to the commander of the ambulance corps.

6. The second lieutenant in command of the ambulances of a brigade will be under the immediate orders of the commander of the ambulance corps for the division, and have superintendence of the ambulance corps for the brigade.

7. The sergeant in charge of the ambulance corps for a regiment will conduct the drills, inspections, etc., under the orders of the commander of the brigade ambulance corps, and will be particular in enforcing rigidly all orders he may receive from his superior officers. The officers and non-commissioned officers of this corps will be mounted.

8. The detail for this corps will be made with care by commanders of army corps, and no officer or man will be selected for this duty except those known to be active and efficient; and no man will be relieved except by orders from these headquarters. Should any officer or man detailed for this duty be found not fitted for it, representations of the fact will be made by the Medical Director of the Army Corps to the Medical Director of this army.

9. Two medical officers from the reserve corps of surgeons of each division, and a hospital steward, who will be with the medicine wagon, will be detailed by the Medical Director of the Army Corps to accompany the ambulance train when on the march, the trains of each division being kept together, and will see that the sick and wounded are properly attended to. A medicine wagon will accompany each train.

10. The officers connected with the corps must be with the trains on the march, observing that no one rides in the ambulances without the authority of the medical officers, except in urgent cases; but men must not be allowed to suffer, and the officers will, when the medical officers cannot be found, use a sound discretion in this matter, and be especially careful that the men and drivers are in their proper places. The place for the ambulances is in front of all the wagon trains.

11. When in camp the ambulances, transport carts, and ambulance corps will be parked with the brigade. They will be used on the requisition of the regimental medical officers, transmitted to the commander of the brigade ambulance corps, for transporting the sick to various points and procuring medical supplies, and *for nothing else.* The non-commissioned officer in charge will always accompany the ambulances or transport carts when on this or any other duty, and he will be held responsible that they are used for none other than their legitimate purposes. Should any officer infringe upon this order, regarding the uses of ambulances, etc., he will be reported by the officer or non-commissioned officer in charge to the commander of the train, all the particulars being given.

12. The officers in charge of a train will at once remove anything not legitimate, and if there be not room for it in the baggage wagons of the regiment, will leave it on the road. Any attempt by a superior officer to prevent him from doing his duty in this or any other instance he will promptly report to the Medical Director of the Army Corps, who will lay the matter before the commander of that corps. The latter will, at the earliest possible moment, place the officers offending in arrest for trial for disobedience of orders.

13. Good, serviceable horses will be used for the ambulances and transport carts, and will not be taken for any other purpose, except by orders from these headquarters.

14. The uniform of this corps is: For privates, a green band two inches broad around the cap, a green half-chevron two inches

broad on each arm above the elbow, and they are to be armed with revolvers. Non-commissioned officers to wear the same band around the cap as a private, and chevrons two inches broad, and green, with the point toward the shoulder, on each arm above the elbow.

15. No person will be allowed to carry from the field any wounded or sick, except this corps.

16. The commanders of the ambulance corps, on being detailed, will report without delay to the Medical Director at these headquarters for instructions. All division, brigade or regimental quartermasters having any ambulances, transport carts, ambulance horses or harness, etc., in their possession, will turn them in at once to the commander of the division ambulance corps.

By command of Major-General McClellan.

(Signed) S. Williams,
Assistant Adjutant-General.

Thus for the first time in the history of our Army was the French system adopted. The advantages accruing from this organization became speedily manifest. At the battle of Antietam, in September, 1862, by the active and energetic exertions of the members of this corps, the disabled of the right wing of the army (there was no ambulance system on the left) were rapidly conveyed from the scene of conflict to the hospitals in the rear. The train of ambulances plied incessantly between the battle-ground and the field hospital. During the night of the battle, all of our wounded in the widely extended field were removed to shelter and received the necessary surgical attention. Different members of the corps behaved with the utmost gallantry, passing freely under fire in their search for the fallen, and advancing at times to the extreme verge of the enemy's pickets. All of our wounded having thus been collected at the temporary depots, such as were deemed best able to undergo further transportation were carefully selected. These, during the following two or three days, were then conveyed by the ambulance train to Frederick City, Md., the nearest point of railway connections. At the first battle of Fredericksburg the results of the persevering endeavors of the ambulance corps were not less happy. During the night following the battle, all of the wounded remaining on the ground not absolutely in the hands of the enemy were safely conveyed to the city of Fredericksburg and its neighborhood. When it subsequently became necessary to evacuate the city of Fredericksburg for military reasons, the wounded were again placed upon the train and safely reached the opposite bank of the river. These fortunate results were, however, obtained at the expense of the ambulance corps, which suffered the loss of one officer and several privates killed, besides others who were captured during their humane efforts to remove their fallen countrymen.

In the Army of the Tennessee, with the exception of General Sherman's corps, no system for the formation of an ambulance train, for confining ambulances to their proper use, or for the ready removal of wounded, had existed prior to March, 1863, when Medical Inspector E. P. Vollum, U. S. A., urged upon General Grant the necessity of establishing an ambulance corps. The proposition was cheerfully entertained, and on March 30th, 1863, the following order was issued from the headquarters of the Department of the Tennessee:

Headquarters Department of the Tennessee, }
Young's Point, La., March 30, '63. }

General Order No. 22.

Army corps commanders will at once enforce the following regulations:

1. All ambulances with the army in the field will be turned in to division quartermasters, each division retaining all the ambulances it now has.

2. Division ambulance trains will be formed in charge of one commissioned officer for each division, one non-commissioned officer for each brigade, and one driver and two enlisted men for each ambulance, to be detailed for that purpose, who will be subject to the direction of the chief surgeon of the division.

3. The officers in charge of division ambulance trains will have direct military control over all the non-commissioned officers and privates of their respective trains, and will see that the ambulances are only used for conveying sick or wounded, carrying provisions for hospitals when necessary, and other purposes connected with the relief of sick and wounded.

4. In removing sick and wounded the enlisted men detailed to attend ambulances, as above directed, will alone be permitted to accompany them, and that they may be rec-

ognized as having been appointed for this purpose, each of them will wear a white badge on the left arm above the elbow, the same to be provided by the Medical Department.

5. Division quartermasters will be responsible for all public property connected with said division ambulance trains, and will exercise authority over all matters pertaining to the packing and preservation of the same.

6. Army corps commanders and medical directors of army corps will make such regulations for the removal of wounded and sick as will, in their judgment, best secure the end desired to be attained under this order.

By order of Major-General U. S. Grant.

(Signed) JNO. A. RAWLINS,
Assistant Adjutant-General.

Actual experience in the field suggested various changes in the original plan adopted in the Army of the Potomac, and on August 22d, 1863, Surgeon Letterman laid before the General Commanding revised regulations, which were published in General Orders No. 85, Headquarters of the Army of the Potomac, August 24th, 1863:

The following revised regulations for the organization of the ambulance corps and the management of the ambulance trains are published in lieu of Special Orders No. 147, Headquarters Army of the Potomac, August 2d, 1862, for the information and government of all concerned. Commanders of army corps will see that they are carried into effect:

1. The army corps is the unit of organization for the ambulance corps, and the latter will be organized upon the basis of a captain as the commandant of the corps, one first lieutenant for each division, one second lieutenant for each brigade, one sergeant for each regiment.

2. The privates of this corps will consist of two men and one driver to each ambulance, and one driver to each medicine wagon.

3. The two-horse ambulances only will be used, and the allowance until further orders to each corps will be upon the basis of three to each regiment of infantry, two to each regiment of cavalry, one to each battery of artillery (to which it will be permanently attached), and two to the headquarters of each army corps; and two army wagons to each division. Each ambulance will be provided with two stretchers.

4. The captain is the commander of all the ambulances, medicine and other wagons in the corps, under the immediate direction of the medical director of the army corps to which the ambulance corps belongs. He will pay special attention to the condition of the ambulances, wagons, horses, harness, etc., and see that they are at all times in readiness for service, that the officers and men are properly instructed in their duties, and that these duties are performed, and that the regulations of the corps are strictly adhered to by those under his command. He will institute a drill in his corps, instructing his men in the most easy and expeditious method of putting men in and taking them out of the ambulances, lifting them from the ground, and placing and carrying them on stretchers, in the latter case observing that the front man steps off with the left foot and the rear man with the right, etc.,—that in all cases his men treat the sick and wounded with gentleness and care; that the ambulances and wagons are at all times provided with attendants, drivers, horses, etc.; that the vessels for carrying water are constantly kept clean and filled with fresh water; that the ambulances are not used for any other purpose than that for which they are designed and ordered. Previous to the march he will receive from the medical director of the army corps his orders for the distribution of the ambulances for gathering up the sick, and previous to and in time of action he will receive orders from the same officer where to send his ambulances, and to what points the wounded are to be carried. He will give his personal attention to the removal of the sick and wounded from the field in time of action, going from place to place to ascertain what may be wanted, to see that his subordinates (for whose conduct he will be responsible) attend faithfully to their duties in taking care of the wounded and removing them as quickly as may be found consistent with their safety to the field hospitals, and see that the ambulances reach their destination. After every battle he will make a report, in detail, of the operations of his corps, to the medical director of the army corps to which he belongs, who will transmit a copy with such remarks as he may deem proper to the Medical Director of this army. He will give his personal attention to the removal of the sick when they are required to be sent to general hospitals, or to other points as may be ordered. He will make a personal inspection at least once a month of everything pertaining to the ambulance corps, a report of which will be made to the medical director of the corps, who will transmit a copy to the Medical Director of this army. This inspection will be minute and made with care, and will not supersede the constant supervision which he must at all times exercise over his corps.

He will also make a weekly report according to the prescribed form to the same officer, who will forward a copy to the Medical Director of this army.

5. The first lieutenant assigned to the ambulance corps for a division will have complete control, under the captain of his corps and the medical director of the army corps, of all the ambulances, medical and other wagons, horses, etc., and men in that portion of the ambulance corps. He will be the acting assistant-quartermaster for that portion of the corps, and will receipt for and be responsible for all the property belonging to it, and be held responsible for any deficiency in anything appertaining thereto. He will have a traveling cavalry forge, a blacksmith, and a saddler, who will be under his orders, to enable him to keep his train in order. His supplies will be drawn from the depot quartermaster upon requisitions approved by the captain of his corps and the commander of the army corps to which he is attached. He will exercise a constant supervision over his train in every particular, and keep it at all times ready for service. Especially before a battle will he be careful that everything be in order. The responsible duties devolving upon him in time of action render it necessary that he be active and vigilant, and spare no labor in their execution. He will make reports to the captain of the corps, upon the form prescribed, every Saturday morning.

6. The second lieutenant will have command of the portion of the ambulance corps for a brigade, and will be under the immediate orders of the commander of the ambulance for a division, and the injunctions in regard to care and attention and supervision prescribed for the commander of the division he will exercise in that portion under his command.

7. The sergeant will conduct drills, inspections, etc., under the orders and supervision of the commander of the ambulances for a brigade, be particular in enforcing all orders he may receive from his superior officers, and that the men are attentive to their duties. The officers and non-commissioned officers will be mounted. The non-commissioned officers will be armed with revolvers.

8. Two medical officers and two hospital stewards will be detailed daily by roster by the surgeon-in-chief of the division, to accompany the ambulances for the division when on the march, whose duties will be to attend to the sick and wounded with the ambulances and see that they are properly cared for. No man will be permitted by any line officer to fall to the rear to ride in the ambulances unless he has written permission from the senior medical officer of his regiment to do so. These passes will be carefully preserved, and at the close of march be transmitted by the senior medical officer with the train, with such remarks as he may deem proper, to the surgeon-in-chief of his division. A man who is sick or wounded, who requires to be carried in an ambulance, will not be rejected; should he not have the permission required, the surgeon of the regiment who has neglected to give it will be reported at the close of the march by the senior surgeon with the train, to the surgeon-in-chief of his division.

When on the march, one-half the privates of the ambulance corps will accompany on foot the ambulances to which they belong, to render such assistance as may be required. The remainder will march in the rear of their respective commands, to conduct, under the orders of the medical officers, such men as may be unable to proceed to the ambulances, or who may be incapable of taking proper care of themselves, until the ambulances come up. When the case is of so serious a nature as to require it, the surgeon of the regiment or his assistant will remain and deliver the man to one of the medical officers with the ambulances. At all other times the privates will be with their respective trains.

The medicine wagons will on the march be in their proper places in the rear of the ambulances for each brigade.

Upon ordinary marches the ambulances and wagons belonging to the train will follow immediately in the rear of the division to which it is attached. Officers connected with the corps must be with the trains when on the march, observing that no one rides in any of the ambulances except by authority of medical officers. Every necessary facility for taking care of the sick and wounded upon the march will be afforded the medical officers by the officers of the ambulance corps.

9. When in camp the ambulances will be parked by division. The regular roll-calls, reveille, retreat and tattoo will be held, at which at least one commissioned officer will be present and receive the reports. Stable duty will be at hours fixed by the captain of the corps, and at this time, while the drivers are in attendance upon their animals, the privates will be employed in keeping the ambulances to which they belong, in order, keeping the vessels for carrying water filled with fresh water, and in general police duties.

Should it become necessary for a regimental medical officer to use one or more ambulances for transporting sick and wounded, he will make a requisition upon the commander of the ambulances for a division, who

will comply with the requisition. In all cases when ambulances are used, the officers, non-commissioned officers and men belonging to them will accompany them; should one ambulance only be required, a non-commissioned officer as well as the men belonging to it will accompany it. The officers of the ambulance corps will see that ambulances are not used for any other purpose than that for which they are designed, viz.: the transportation of sick and wounded, and, in urgent cases only, of medical supplies. All officers are expressly forbidden to use them, or to require them to be used, for any other purpose. When ambulances are required for the transportation of sick or wounded at division or brigade headquarters, they will be obtained as they are needed for this purpose from the division train, but no ambulances belonging to this corps will be retained at such headquarters.

10. Good, serviceable horses will be used for the ambulances and medicine wagons, and will not be taken for any other purpose except by orders from these headquarters.

11. The corps will be designated, for sergeants, by a green band 1¼ inches broad around the cap, and chevrons of the same material, with the point toward the shoulder, on each arm, above the elbow; for privates, by a band the same as for sergeants around the cap, and a half-chevron of the same material on each arm above the elbow.

12. No persons except the proper medical officers or the officers and non-commissioned officers and privates of this corps will be permitted to take or accompany sick or wounded to the rear, either on the march or upon the field of battle.

13. No officer or man will be selected for this service except those who are active and efficient, and they will be detailed and relieved by corps commanders only.

14. Corps commanders will see that the foregoing regulations are carried into effect.

By command of Major-General Meade.

(Signed) S. WILLIAMS,
Ass't Adjutant-Gen'l.

(*To be continued.*)

EMASCULATION AND OVARIOTOMY AS A PENALTY FOR CRIME AND AS A REFORMATORY AGENCY.

BY A. C. CORR, M.D.

A year ago the Illinois State Society had a symposium, as it were, on the mode of punishing, reforming, and "executing" criminals, so as to best subserve the purposes of justice and protect society. But it was apparent the members were not in a mood to give the time to the discussion that the importance of the theme demanded. Two of the papers presented were moderate in tone—one being devoted to the "Mode of Executing Criminals," the other suggesting education and reclamation as more humane and philanthropic, while equally well protecting society; while a third proposed the somewhat remarkable process of emasculation and ovariotomy, not only as a penalty for crime, but as a means for the reformation of criminals. The proposition was discussed under nine considerations, the first two of which are as follows:

We are taught by both physiology and psychology that human beings are controlled in their conduct, and actions and appetencies are expressed, through their organic instincts. Of these, *two* are of paramount importance. They are: the love of life, and sexual love. The first is from birth to death always in active operation in preserving the individual from the various accidents and diseases which tend to deprive him of life. It is the strongest, and outlasts all other organic instincts. Next to this is the love of sex. It dominates human conduct and desires. Its bestowal was for a wise and beneficent purpose, but when uncontrolled it is potent for evil.

The greater portion of the crimes characteristic of the criminal and vicious classes may be traced directly and indirectly to the influence of this uncontrolled and dominating sexual love. The rapes, homicides, suicides, defalcations and embezzlements may be ascribed either directly to sexual love, or to the influences associated with it. So well is this understood that when we hear of the cashier of a bank absconding with its funds, or a trusted clerk robbing his employer and betraying his confidence, almost the first comment heard is: "Oh, there is a woman in the case." With scarce an exception, there are few vices in the calendar of crime, licentiousness, prostitution, intemperance, gambling, and others that are nameless, that are not designed, associated with and maintained by sexual love.

I confess there is a glamor of plausibility in the conclusions implied in these two considerations. But is it true that all criminals are instigated and dominated by love of the opposite sex? I confess to an incredulity in the mere assertion that physiology and psychology teach such. This may be all there is in the conduct of the individual who has little or no inhibiting intellectuality, and if those sciences are studied with strong egoistic and introspective bias such a conclusion may be reached, but certainly in the vast majority of individuals in society these two

so-called dominating instincts do not exercise paramount control. Personally I have been brought in contact with several criminals who were not licentious, and likewise with many licentious persons who are not otherwise criminals.

I recall that within the past twenty-five years 2,500,000 men offered their lives, with all else that was sacred, and the deprivation of the mere gratification of sexual love, as a willing sacrifice to their country's perpetuity and its sacred institutions. Surely they were not dominated by the mere selfish instincts of love of life or love of sex. It is said, as a rejoinder, that they were not of the criminal class; true, they were not, but a proportion of them were, and such found no gratification of love of life or love of sex on the battle-field; and the whole of the 1,500,000 who opposed them were offering and sacrificing as much for the perpetuity of a crime. So I think it is *not* without question that those two so-called dominating instincts always actuate and dictate the conduct of an individual, even though he be a criminal.

The next consideration presented in the paper referred to is as follows:

> The physical or structural characteristics of the criminal and defective classes are produced, reproduced, and multiplied and perpetuated, by intermarriage or sexual commerce of persons of like defects, and we have accordingly the results of the activities of living matter, or what is called heredity.

The phrase "defective classes," in this consideration, is a redeeming feature of it, for certainly criminals are morally defective in the abstract sense. But is it true that so large a proportion of the criminal class as is implied is the result of heredity, strictly speaking—the offspring of criminal progenitors? That the defect, moral imbecility, is congenital in all and inherited by many, is, I think, beyond question. The criminal defect is often a mental complex, a by-product of apparently normal mental conditions of ancestors, neither of whom was criminally inclined. To have been inherited, it must be a like trait to that which was exhibited in the ancestors, one or both. I am acquainted with the Harry Hayward family on both sides; they were not criminals. I am acquainted with a Methodist minister who was a presiding elder; he and his wife are amiable people, above reproach; yet their two sons are both criminals. Some families are all criminals but one, and where is the flock without a black sheep?

As I have said, the criminal tendency is a mental complex, a moral imbecility, congenital or hereditary, but in either respect largely the result of environment and synergistic influences. Probably more of this synergistic influence is manufactured in the neighborhood of Peoria than anywhere else; and in speaking of environment I am impelled to ask: What is crime? Certainly some crimes are geographical and others are municipal. There is certainly much in the education of people that relates to the perpetuation of crime.

Our next "consideration" reads as follows:

> By the imposition of this penalty—emasculation and ovariotomy—we destroy the capabilities of these defective criminal classes to inflict injury upon society, thus depriving them of the power of reproduction. This . . . is one of the strongest considerations in favor of the proposed penalty. It has an immediate and far-reaching effect.

As far as the intent of the above is concerned, I have little to say, only that it would have, no doubt, a good influence as far as the hereditary defect in criminality is concerned, but to the congenital class it could not be applied primarily. Secondarily, many of the former would not transmit their own defects, nor would all the hereditary traits be transmitted; some good has come out of Nazareth.

> For the purpose of intimidating others from the commission of crime, while neither cruel nor vindictive, it is more terrifying and repulsive, next to death, than any or all modes of punishment. The loss of sexual capability as a mark of manhood is so utterly abhorrent to all men that it would be avoided if possible by all individuals not hopelessly insane.

What data have we that the mere loss of sexual capabilities is so abhorrent that all persons not hopelessly insane would avoid it? Certainly in the absence of such data, personal ego-introspection is all the basis for any such conclusion. The technique of emasculation would be a punishment, no doubt, which all would shrink from, but whether it would be abhorrent enough to

prevent crime other than rape, we cannot say without more data. I have known individuals anxious to have the operation performed; I knew one case where it was performed by the individual himself; have seen cases where it was clandestinely performed by others for revenge. These and the Oriental eunuchs are all the instances we have, except the modern castration for enlarged prostate. From this, its effect on criminality and crime cannot be judged, except that it would in all probability prevent the repetition of rape.

That loss of sexual capability is abhorrent to aged men, is made manifest by the fact that many times they appear much more concerned about senile impotence than about the mental degeneracy that accompanies it. The phraseology of this "consideration" makes it apply only to men, but I infer from the original proposition that women should be included. During a large part of their lives, sexual capability is of no consequence to women, and is totally disregarded—in fact, sexual commerce is abhorrent and disgusting; and the bearing of offspring is at most times undesired by all, and beyond doubt abhorrent to the criminal class.

The sixth consideration presented is:

> In unsexing all constitutionally depraved convicts, the most important of all results is reached, the limitation of the productive capabilities of this class, thus aiding natural selection, and insuring if extensively applied the survival of the fittest.

This is admitted, as far as it would curtail production, but if the criminal so punished is left at large, is it sure he would not prey on society in all crimes except the repetition of rape? If emasculation and ovariotomy as a punishment for criminality, vice, and immorality, will so change the vicious traits and immorality of the individual as is intimated in this proposition, I am sure we have a suggestion of a new theory of morals, to say the least of it. Does emasculation stimulate the moral sense?

In reference to the Mohammedan eunuchs —the pith of the next argument adduced—is it not a custom in Turkey, a fashion? And do they not ask for emasculation as a means of place and pay? Are they not slaves?

The truth of the foregoing cited considerations, I claim, is not so entirely self-evident as is implied. To say the least, they are not wholly true. Would not emasculation excite revenge as well, and would not the criminal strive equally hard to evade it by litigation methods? If I am correct, the eighth "consideration" also collapses.

To the general statement as to range of application of the punishment, to the effect that it might be safely applied to insane persons, cranks, monomaniacs, and cases of paranoia—which constitutes the final plea of the paper we are considering,—I have only to reply: *Would it change their delusions and make them safe citizens at large in society?* As an experimental treatment I should not object, but until sufficient of such data is gathered to assure safety, I think it not best to castrate them and turn them loose.

I cordially agree with that part of the proposition as suggested by Doctor Agnew, of Philadelphia, that emasculation be applied as a punishment—precautionary—for rape, because one who has such a perverted impulse should, for the safety of society, be rendered unable to commit the deed involved.

But, gentlemen, this is not the most heinous of crimes growing out of the relation of the sexes. Far more infamous is that of seduction. He who would ingratiate himself into the affections of a young lady or a girl to seduce her, *is as much more guilty of crime* than the rapist, as the highway robber who plans the murder of his victim is more guilty than he who, through impulse of sudden provoked anger, strikes his victim down by a single blow.

Carlinville, Illinois.

CHLORAL AND IPECAC IN LABOR.

BY N. C. MITRA, M.A., M.B.

The uses of chloral in labor have been dilated upon by many accoucheurs, and Doctor Playfair in his standard work especially has laid great stress on the advantages of using it in the first stage.

In cases where the os is rigid, undilatable, and the uterus firmly contracted, chloral acts like a charm. Two doses, of fifteen grains each, at intervals of half an hour, are followed by very beneficial results; the patient goes to sleep, and when she awakes the os is

forced and dilated, when delivery may be completed in a very short time. Playfair insists on its use in those cases where, in addition to the rigidity of the os, the uterus is spasmodically contracted. That is exactly the case where the waters have long escaped, the arm presents, the uterus is firmly contracted, and the os so rigid that two fingers cannot be passed by the side of the presenting part. It is all very well to suggest various other remedies, but the circumstances of the seclusion of an Indian zenana must be borne in mind. It may strike the reader as something very unusual that male accoucheurs (or medical men) are never even consulted in midwifery cases in India, unless something serious turns up, and then the medical man is simply consulted, and by no means allowed to examine the private parts. It thus becomes a serious matter for an accoucheur, when consulted in such emergencies, to prescribe drugs that will have most pronounced effect. Barnes dilators are good in their way in facilitating dilatation of a rigid os, but one can hardly expect to find such instruments in outlying stations. Chloroform, moreover, is objected to by many, and it tends to diminish uterine action, which is not desirable in the first stage of labor; moreover, I have found chloral far more useful. In one instance, where the arm presented within a rigid os, I could not find any relaxation after chloroforming the patient; and it was only after a warm hip-bath and the administration of antimonial wine that dilatation was secured. In two other cases of arm presentation the uterus was firmly contracted, the fœtus dead, and the os rigid, when two doses of fifteen grains of chloral, given twenty minutes apart, in an hour's time brought about dilatation, when the fœtus delivered by turning. Thus we have a useful agent in chloral in facilitating relaxation of a rigid os, and its use ought to be extended.

Ipecac is an oxytocic; though this fact is rarely mentioned in works devoted to obstetric medicine, it has been long recognized by medical practitioners in India. When uterine pains are dull and labor not progressing favorably, the rule is to give three to four grains of powdered ipecac.

In the *Therapeutic Gazette* for January, 1893, Doctor H. Stillmark reports a confinement case in which he made a most successful trial of wine of ipecac—two or three doses, of ten to fifteen drops each. This, to my mind, is too small a dose to produce any decided effect on labor. We in India repeatedly observe the pains become stronger immediately after administering ipecac, when delivery is effected within a short time. It is still a question whether ipecac has any direct action on the muscular fibres of the uterus, akin to that of ergot, and were such a fact it would seem as if the use of wine of ipecac for relief of bronchitis in advanced pregnancy would be followed by premature labor. I believe ipecac produces nauseating sensation, and thus indirectly produces relaxation of the os and contraction of the uterus; that this is so, is evident from the effect induced when one employs antimonial wine. There is, moreover, among parturient females of Bengal, a curious custom which suggests the rôle of ipecac (I do not know whether this obtains among European females): If the pains are not strong, the patient or her friend places a bunch of her hair into her mouth, which necessarily produces nausea, when an indirect action is brought to bear upon the uterine fibres. To produce this effect, larger doses than ten to fifteen drops of ipecac must be used—three to five grains of powdered, equivalent to about one to ten drachms of the wine, may be given.

Ranchi, Bengal.

AMYLACEOUS INDIGESTION, AND ITS TREATMENT BY TAKA-DIASTASE.

BY R. COWAN LEES, M.B., F.F.P.S.*

There is no complaint so common as indigestion, and few diseases have received so much attention; therefore it is needless on my part to do more than simply to tell of the good results that have been obtained from the judicious use of Taka-Diastase in the treatment of amylaceous dyspepsia.

I cannot, however, begin to discuss the merits of any medicine without, in the first place, emphasizing the great necessity of a proper dietary, and showing how, in books published upon the dieting of special diseases,

*Lecturer on Practice of Medicine, Western Medical School, Glasgow.

the greatest errors exist in the food combinations recommended.

For a long time my belief was that indigestion was purely a disturbance of the stomach function, and that the only method of cure was a suitable dose of pepsin, with or without the addition of acids or alkalies according to the apparent necessities of the case; but experience has taught that the great cause—indeed, in nearly nine cases out of ten—lies in the careless manner in which the hydrocarbons are hurriedly passed into the stomach without being acted upon by the ptyalin of the secretions of the mouth.

Recently I met in consultation one of our leading physicians, who, in order to lessen the slight diarrhœa which beef-tea was producing, recommended some amylaceous food to thicken it; but on drawing his attention to the fact that in such cases the starchy food was conveyed into the stomach without carrying with it its necessary quantity of ptyalin, combined or uncombined, he at once stated that he had never thought of it in that way.

Now I am anxious to impress upon my readers the fact that, at the present day, too much amylaceous food is taken into the stomach soaked with tea, coffee, cocoa, milk, beef-tea, or other fluids, without the slightest consideration being given to the great necessity of the action of the ptyalin.

The stomach will only *continue* the action commenced in the mouth for a period of about half an hour or slightly more, but it will not originate it; therefore all the greater care should be taken to ensure complete mastication and admixture of all starchy foods with the mouth-juice before swallowing.

When one thinks of the large number of patients who constantly soak starchy foods with fluids, it is not difficult to arrive at the conclusion that by far the greatest number of cases of indigestion are what may be termed amylaceous dyspepsia.

That the indigestion of starchy food is the true cause of many other diseases, I have no hesitation in saying, for I have carefully watched this both in adult and infantile life; but I need not further refer to this here, as it is my intention to discuss the action of such resulting ptomaines in another paper; I will only say I regard the ptomaines of decomposed starch (amulon-ptomaine) as being almost as injurious to the human body as the ptomaines of nitrogenous foods.

The ingestion of malt extract gives great relief in many cases of amylaceous indigestion, but with some persons it causes unbearable biliousness, due no doubt to the too sudden and excessive absorption of glucose, which is absorbed by the stomach; therefore, in the great majority of cases which come before me I am compelled to be very careful in my recommendation of it.

The ordinary diastase of commerce has little or no amylolytic action, for in an experiment which I carried through, with a sample procured from a good wholesale house, it required nearly forty grains to do that which one grain of Taka-Diastase did in less time. The first cost of Taka-Diastase may appear to many as a great hindrance to its use, but when its powerful amylolytic action, as against ordinary diastase, is taken into account, the verdict is in favor of the former, and success in the treatment of such cases as are under discussion here becomes an accomplished fact.

The regulations as to diet, which I advise to patients for the first week or two, are very peremptory. They must not use fluids of any kind whilst masticating amylaceous food, and are restricted from the too free use of tea, soups with vegetables, etc.

Soon the improvement becomes so evident that the patient is quite willing to pursue this method of treatment.

Tea, I am inclined to believe the greatest defaulter; not that it is injurious in itself, but because it is generally taken along with amylaceous food in order to soak it and make it more easily masticated. Thus the inactive tea, so far as the digestion of starch is concerned, usurps the place, in mastication and the formation of the bolus, which the active mouth-juice should occupy, with the result that that which should be passed into the stomach either in a digested or rapidly digesting condition (the latter to be finished in the stomach) is swallowed in a state in which it cannot be digested before the acid stage of digestion sets in.

Soups with vegetables I place second, though in Scotland, where it is the custom to take puddings with milk or cream, this form

of food is equally injurious, because here again the starch is passed directly into the stomach without being altered into maltose as it ought to be.

The introduction of Taka-Diastase I look upon as of far greater moment in the treatment of indigestion as met with in every-day practice, than that of pepsin, but we are only at the experimental stage as to the beneficial effects of this new digestive ferment, and I hope that other medical men may have the same good results from its use as those with which I have been favored.

As acid digestion is believed to commence from half to three-quarters of an hour after eating, Taka-Diastase, to be of greatest benefit, should be taken, in one- to five-grain doses, either immediately before or after meals.

Glasgow, Scotland.

Clinical Notes.

EXTRA-UTERINE PREGNANCY; UNDEVELOPED UTERUS AND EPILEPSY; ANAL FISSURE AND RECTAL PROLAPSE.*

BY EDWARD W. JENKS, M.D.

Case 1.—This patient, aged 22, and unmarried, was, by her own confession, the victim of a dissolute life; had had repeated abortions, the last three months previous to her appearance at the clinic; also several attacks of gonorrhœa, of which due evidence appeared in the glands of Bartholin, in the discharge from the uterus, and characteristic symptoms of tubal and ovarian disorders. Examination revealed upon the right side of the uterus, involving the tube and ovary of that side, a tumor, apparently the size of a large orange; and upon the left side the ovary and tube adherent and painful to the touch, but without positive evidence of pus. This girl having had gonorrhœa, it might be assumed her condition was wholly the result of gonorrhœal infection.

On opening the abdomen I found adhesions agglutinating all the pelvic organs, which I separated carefully and yet as rapidly as possible; then ligated the pedicle of the tumor on the right side of uterus, close to cornu. The tumor included the right ovary and Fallopian tube. The left ovary and tube, after being freed from adhesions proved to be without evidence of gonorrhœal infection, hence were not further molested. As there was considerable bleeding, the abdominal cavity was washed out with hot water and the abdominal wound closed in the usual manner.

The tumor removed proved to be, as suspected, an encysted fœtus, about the third month of pregnancy. I had no means of knowing when this woman became pregnant—it may have been six months or a year before, as it was impossible to glean from her any definite knowledge. It is evident, however, from the appearance of the specimen, that fœtal development was arrested some time ago, as it showed signs of disintegration.

Three weeks after the patient was operated upon, she appeared in good health and unmistakably in a much better physical condition than when she first presented herself to me. Her history since the operation, however, has been in some respects remarkable, and in my experience quite unique. She was one of the most unmanageable of patients. Six hours after the operation, there being no indications of surgical shock, a saline cathartic was administered. Early the following morning the nurse discovered her sitting upon the edge of the bed, having previously been walking about the room; and when asked why she was up, she gave the reply that she must go to the closet, as her bowels were about to move. It was only through considerable persuasion and some physical effort that she was induced to use the bed-pan; and it was only by threats of a straight-jacket that she was kept from getting up and walking about the room during the next two days. I afterwards learned there was not a day since the second one following the operation, when the nurses were out of the ward, that she was not up and walking about. Two weeks later she dressed herself and went out to church, four blocks away. The remarkable feature of the case is, that with the exception of a few hours of discomfort following the operation, there has been no disturbance of function or elevation of temperature, as at no time did the thermometer indicate 100° F.

Case 2.—Miss D——, aged 20, was a constant and regular attendant at the clinic for a year. She appeared physically well developed; mammæ and external organs of generation presented nothing abnormal; vagina of normal length, but the uterus was rudimentary merely, being less than one inch in length.

*Gynæcological Clinic, Michigan College of Medicine and Surgery.

She had menstruated but once; during four years past had been subject to epileptic convulsions, usually of a monthly type, and, according to her mother's statement, increasing in severity, she meantime becoming imbecile. When she walked the left heel did not touch the floor, all the weight of that side being borne upon the ball of the foot; the left hand, too, was contracted so that the ends of the fingers crowded into the palm; and when the fingers were straightened, the forearm extended, and the hand brought around to the side, the extremity, when not held, flopped back so that the hand would strike the spinal column. These peculiar clonic spasms were a marked feature of the case

This girl had been treated medically and surgically—bromides and kindred remedies seemed to aggravate rather than diminish any of the symptoms; she had even been subjected to nerve-stretching. It is apparent she never derived any benefit from the various modes of treatment prescribed. The opinion of several of my colleagues, in which I somewhat reluctantly concurred, was that the *fons et origo* of the convulsions and the other nervous symptoms was seated in the generative organs, and that, since every mode of treatment had been futile, exploratory cœliotomy was advisable.

When I finally opened the abdomen, I found the right ovary of the size of a pullet's egg, presenting the white glistening appearance of an ovarian cyst. This I removed. The left ovary was somewhat larger, but of the same general appearance. The operation was unattended by difficulties, and the patient exhibited no signs of shock. On incision of the right ovary I was unable to discover normal stroma or any vestige of a Graafian follicle. In the left ovary, however, was a single corpus luteum, corresponding to the single time she had menstruated.

It is my belief that this girl never had normal, healthy ovaries, and that the cystic degeneration was of pre-natal origin. I consider the pathological condition fully justified the operation.

Four months after operation she presented an appearance of health, with clear skin and bright eyes; her speech was no longer hesitating, and she walked firmly without a hitch or a halt; had not had a single convulsion, and the only indication of her former trouble was in the hand, no longer disabled and useless, but, under nervous excitement or fatigue, exhibiting slight spasmodic contraction, which will probably disappear with time.

Case 3.—When this patient came before me she was nursing a child six weeks old, and consequently was hardly a first class subject for a surgical operation. She was suffering from prolapsus and a hæmorrhoidal condition of the rectum, of some years' standing, greatly aggravated by pregnancy and parturition; after her confinement the severe spasmodic pain following defæcation was indicative of anal fissure, and the rectum, which formerly protruded an inch and a half, now descended further with every movement of the bowels—involving, however, only the mucous and none of the muscular structure.

First I paralyzed the external sphincter with my thumbs; then operated by making a superficial cut in which to imbed the sutures through the skin at its junction with the mucous membrane,—then ligated the prolapsed mass in four sections. As I inserted the double-threaded needle from the integumentary side through the first section, the assistant dragged down as much of the mucous membrane as had been prolapsed, that it might be embraced within the tightened ligature. The remaining sections were treated in the same manner. I made this operation instead of Whitehead's or any other of those recently devised, because I universally obtain better results thereby; with other surgical procedures, stricture of rectum is liable to occur.

Four weeks later the condition of the patient was eminently satisfactory in every way. The parts had healed perfectly, the prolapsed rectum was no longer apparent, and defæcation was entirely painless.

Detroit, Michigan.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

A GOOD THING.

Editor MEDICAL AGE:

It is not often that a child invents anything of interest to surgeons and surgery; but here is one. My little friend, Miss Queenie D——, twelve years old, having fractured both bones of the forearm through the middle third, was very desirous of getting back to school, but the dressings on the injured arm prevented her wearing a waist. She therefore asked her mother to make her a dress like the well known "Mother Hubbard," altering it so that, instead of opening on the back or front, as customary, it would open on the side of the neck corresponding to the injured arm, the opening extending outward to the shoulder-tip and down the outside of the sleeve to

the wrist. The underwear was modified in the same way, a few hooks and eyes holding it in place.

The ease with which these garments can be removed and replaced is surprising, and the little one easily dresses herself without assistance. A wide collar or small cape conceals the opening on the shoulder. She asserts, and I am prepared to accept her opinion, that almost any waist can be so modified "without injuring it a bit."

W. H. PETERS.

Lafayette, Indiana.

THE WOODBRIDGE TREATMENT.

Editor MEDICAL AGE:

I have been engaged in the practice of medicine for twenty-three years, and the treatment for typhoid when I entered the ranks was that devised by George B. Wood, of Philadelphia; but I have been employing, latterly, the Woodbridge treatment, and with most satisfactory results. I find that it prevents the patient passing into the condition of low muttering delirium, with tympanitic bowels, dry skin, and brown, cracked tongue, followed in many instances by violent hæmorrhages and death—even should the patient live, he is for weeks in the "valley and shadow of death."

In his presidential address before the Iowa State Medical Society in 1891, Doctor Middleton truthfully remarked: "One of our most common disorders is typhoid fever, but its proper prevention is so manifestly in hygienic directions of the plainest sort that the English sanitarian says some one ought to be hanged whenever a case develops; but let it once lay hold on an individual, and characteristic ulceration of Peyer's patches begins. All know the many and discouraging days and weeks that follow till, with mouth open, and eyes that have no speculation in them, the patient lies all but moribund. And you know that *cures* would be welcome, since *prevention* has failed." This, from the gifted pen of one of the ablest clinicians in the West, gives the exact status of the treatment of typhoid.

I would say to the physician who has not given the Woodbridge treatment a full and fair trial, that he should do so at once; and I personally believe Woodbridge's name will go down into medical history alongside the names of McDowell, Sims, Morton, and the host of others who have dared to become originators and reformers.

Fraternally yours,

H. E. W. BARNES.

Creston, Iowa.

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., DECEMBER 10th, 1895.

Editorial.

THE TREATMENT OF PHTHISIS.

In no disease of the nosology is routine treatment so unqualified an evil as in phthisis, inasmuch as therapeusis is generally based upon title rather than upon clinical manifestations and demands. Even those methods, the efficacy of which is undoubted, should be limited by the peculiarities of the malady induced by individualism.

In Europe, fashion has proclaimed mountain-climbing to be of benefit, inasmuch as it provides rarefied air and promises increased rapidity and volume of the circulation, expansion of the pulmonary apparatus, and exposure of a greater surface to the influence of the oxygen of the atmosphere, whereby morbid products may be in greater degree consumed. Unfortunately, however, fashion is apt to be a routine prescriber, on the hither as well as the further side of the Atlantic, and in the United States the command to go to California or Colorado has its errors emphasized in the cold portrayal of tombstones against the blue outline of the landscape; and such is the stern monition offered by every so-called health r esort whether of high or low altitude, since common sense should teach there is no royal road to relief from any malady, and no universal panacea for consumption, not even in increased or diminished oxygen.

Recently Doctor Volland, of Davos-Platz,* scored what he terms "stereotyped therapeutics," and in so doing paid particular atten-

* *Therapeutische Monatshefte.*

tion to mountain-climbing and hydropathy. He rightfully insists the former is to be recommended with the greatest caution, and that "if it results in no positive harm in eight cases out of ten, the remaining two are with certainty injured." The same is equally true of the cold-water treatment—few consumptives are fit to bear the shock, let alone the succeeding depression which persists for varying periods of time according to the tone and constitution of the individual patient. Respiratory gymnastics are all well enough in their way when carried on judiciously under proper supervision; but their universal application regardless of pathological and physiological factors is most pernicious. Tubercular disease of the joints is invariably treated by enforced and complete rest; then why not also tubercular disease of the lungs? As a matter of fact, were lung tissue possessed of sensitive fibres, pulmonary tuberculosis would long since have been treated as is joint tuberculosis; but unfortunately for the former, a diseased lung can make no protest of pain against ill-advised gymnastics, and it is only when the pleura is invaded that this fact is most emphasized. And yet the commonest principles of physiology teach that a diseased lung is an organ requiring indulgence even in greater degree than a diseased joint; and although pulmonary activity is an essential concomitant of existence, daily observation evidences that the function of the respiratory muscles over diseased portions of the lung is usually suspended, rendering that organ practically motionless. "Lung gymnastics, mountain-climbing, douches, etc."—remarks Doctor Volland—"violate that paramount rule of medicine which demands that the remedial efforts of Nature be carefully encouraged and supported. The more these efforts are baffled and thwarted, the greater the danger to the patient."

He further protests against the prevailing excessive administration of spirituous liquors, as tending to promote drunkenness, gastric catarrhs, fatty heart, fatty liver, and to lessen appetite—whereas appetite is the chief essential in securing proper nourishment. At the same time there is equal danger in rushing to the opposite extreme and forbidding the glass of beer or light wine at the two principal meals.

But the most vigorous remarks of Doctor Volland are directed against the over-feeding of phthisical patients. Our present knowledge teaches that the chief hope as regards the amelioration and cure of pulmonary phthisis is in the general improvement of nutrition—a principle that has been again and again emphatically enforced by the failure of tuberculin. The appetite must be improved, digestion invigorated, and assimilation promoted. One of the first results of sojourn in high altitudes is an improved appetite—the patient craves more food and eats heartily,—and if his medical advisor does not bid him check these impulses in time, the gastric powers may be forever undermined. The eructations, pressure and fullness after eating, coated tongue, fœtid breath, easily provoked vomitings—especially when coughing,—and undue sensibility in the region of the stomach, all point to a catarrhal condition which is especially apt to be followed by gastric atony. As a matter of fact, few patients bear this excessive dietary for any considerable period without noticeable suffering; others gain in bodily weight, and in so doing their anxiety regarding the pulmonary process is lulled.

But experience teaches that an increase in weight is by no means always attended with amelioration of pulmonary disease; many consumptives continue to lose weight despite an abundance of nourishment, while many more lose appetite and are seized with loathing at the sight of food. For a number of years past the majority of pulmonary patients arriving at Davos-Platz from medical institutions were suffering from gastric catarrh and dyspepsia, which Doctor Volland emphatically declares is a sequel to over-feeding.

Citing the excessive dietary thrust upon so many consumptives, the Doctor suggests the inquiry as to how long a healthy person with good appetite and normal digestion can withstand such monstrous over-feeding? And what a healthy subject cannot do with impunity is expected from pulmonary patients suffering not alone from general debility, but particularly from enfeebled digestive function! Improvement in the disease process

can only take place when appetite and assimilation are normal; but the existence of genuine appetite should never be assumed simply because the patient believes he can eat well; careful inquiry should be made as to whether a sensation of fullness and pressure is ever experienced in the abdominal area after eating, whether eructations occur, and whether the breath and tongue are normal.

Again, since the forced feeding advocated by Weir Mitchell for emaciated neurasthenics and hysterics has been found to yield excellent results, this method has been applied to pulmonary disease, which certainly presents no factor in common with the other two maladies.

Hysterical emaciation is manifestly based on a condition that is half psychopathic and accompanied with a species of food-refusal. The loss of appetite in consumptives, on the other hand, is usually conditioned only by fever, however slight the latter may be.

Murchison has expressed the fear that in the reaction which has followed the former starving of typhus fever, English medicine is in great danger of going to the opposite extreme. Similarly, the stuffing of consumptives is not scientific, but is a gross breach of science. There is likewise such a thing as the injudicious use of fresh air. While reclining-chairs have, in this connection, been of great service—since they render possible the combination of rest and open air with sunshine,—it is a mistake to permit patients to remain in the open air during dubious weather until late at night, or to send them forth on damp or cold days when a warm room is decidedly preferable.—In spite of the warmest clothing and covering, rheumatic and pleuritic difficulties are not rare, and catarrh of the upper air-passages seems to occur quite frequently. It would seem also that the soil is thus prepared for subsequent influenzas.

In conclusion, Volland pays his compliments in very vigorous language to those who blunder in the use of specific medicaments. For the cure of tuberculosis there is no specific. This must be borne in mind ere deciding to give the patient as much creosote as he can tolerate. If among ten phthisical patients, a single one can be found to possess the necessary tolerance for this agent, the remaining nine will sooner or later complain of gastric troubles, resulting from the attempt to increase the dose. Further, the tolerance of the one patient by no means proves that his phthisis has been brought to a standstill by the medicament; on the contrary, it may be asserted that the same power which Nature gives the patient to resist the disease helps him to overcome the toxic action of the drug. It is astounding what an incredible tolerance many consumptive patients are capable of developing for the most mistaken therapeutic measures! The evidence when carefully sifted goes to show that small doses of creosote stimulate the appetite at times; therefore let this result be accepted as sufficient, since it is the utmost that can be expected of any medicament in the treatment of consumption. When the appetite is restored, discard the drug, returning to it again when appetite is suspended. The habitual administration of creosote unquestionably produces in nine-tenths of all cases profound gastric disturbance, which is of ominous import to the patient and can be overcome only with great difficulty even in the most salubrious climate. Finally, ever bear in mind that the consumptive is a very ill subject even in the early stages of the malady; that every passing disturbance may be fraught with serious injury; that each and every extravagance in treatment may result disastrously. "*Care and caution in all things*," is the motto on which the treatment of pulmonary disease should be based.

ERGOT IN MENINGITIS.

In the *New Orleans Medical and Surgical Journal*, Doctor I. F. Young condemns the opium treatment of meningitis as both unscientific and unsuccessful. He declares the indications are: To relieve the nerve strain, and to promote or produce quiet, refreshing sleep as a means to this end, which may be secured by bromides and chloral; to lessen or restrain inflammation by reducing the blood supply to the affected organs, which may be accomplished through bromides, bel-

ladonna, or ergot; to relieve hyperæsthesia and tetanic muscular contractions—bromides, chloral, and belladonna; to sustain the vital powers in the most careful manner; to avoid all remedies which will irritate, excite, or impair the brain, or that promote stupor or impair digestion—quinine, alcohol, opium; keep patient in a darkened and well ventilated room; after the acuteness of the attack begins to subside, promptly institute measures to repair the damage already done—iodides and belladonna,—a precaution often overlooked or too long delayed.

Doctor Young first gives calomel, followed by a bromide, and if there is high temperature some "simple fever drops," in the meantime awaiting developments. If the symptoms are severe or the child large, he combines the bromide with chloral. If there is severe headache and it fails to yield to the foregoing, he administers drop doses of Ergot, which he declares seldom fail to relieve the cephalalgia or the symptoms which so often occur in young children; indeed, he declares he has seen Ergot relieve the spasms promptly in this disease when all the usual remedies, including opium, have utterly failed. He likewise applies cold to the head whenever indicated or agreeable; counter-irritation along the spine and back of the neck with croton oil diluted with turpentine, whenever there is spinal irritation; small blisters behind the ears whenever stupor is increasing or there is approaching coma. It is very important to begin treatment as early as possible for the removal of the effusion, and as soon as the fever declines he recommends iodide of potassium with belladonna given every four or six hours, believing this combination secures better results than when either drug is given alone. He explains his use of belladonna as follows:

> It assists the chloral and bromide very materially in relieving pain and quieting the patient. It aids in lessening the blood flowing to the brain; prevents the depressing influence of the chloral and bromide on the heart; stimulates the latter; elevates the temperature, which is inclined to fall below normal; dries the surface which is now bathed in perspiration, and promotes elimination by acting on the kidneys; overcomes constipation; quiets the nervous system without disturbing digestion or appetite; renders iodide of potassium much more tolerable to the system while increasing its efficacy; and last, but not least, has most marked stimulating action on respiration, which is usually irregular and sighing, sometimes rapid though usually slow, or even temporarily arrested at intervals.

He further adds that since he has adopted the use of these remedies together with systematic and liberal nourishment, the patients, with few exceptions, on convalescence not only feel well, but recover their full physical and mental vigor.

APIS MELLIFICA.

Though this is a remedy distinctively homœopathic, it is used by nine-tenths of the eclectics, and recently has received considerable attention at the hands of the regular profession. It is claimed to be a diuretic most certain in its action and of great utility. It has repeatedly been stated that an infusion of from ten to twenty honey-bees in a pint of water is a most certain remedy in suppression of urine from atony, and in other forms of both suppression and retention; likewise in urethral irritation when of acute character and accompanied by inflammatory symptoms. It is also claimed as useful in the treatment of all dropsies, particularly of the post-scarlatinal variety; in irritable bladder with teasing tenesmus; where the urine is scanty and high-colored; when micturition is frequent and accompanied by much soreness and burning. In eruptive diseases such as urticaria, measles, scarlet fever, the throat being constricted, of a bright red color, with a pulpy, swollen submucous tissue, hot and dry; when the uvula is swollen, long, and sac-like; when deglutition is difficult or the tonsils intensely inflamed; and in erysipelas with a vesicular eruption,—Apis is the remedy *par excellence.* In œdema with irritation (a cellulitis), says Goss, "Apis should not be forgotten." In œdema of the epiglottis and larynx, and consequent pain and dyspnœa; in pericardial effusions, with distressed and disturbed heart action; in menorrhagia, leucorrhœa, amenorrhœa, ovarian and abdominal troubles, the remedy can, it is asserted, be prescribed with great confidence. The action of Apis appears to be constant upon the whole genito-urinary tract.

Items and News.

Cycle Therapeutics.—

A special therapeusis, with *toxins* and *toxalbumens* as a base, has been developed quite recently, and yet we are only following in the footsteps of our forefathers—we are all aware that the active poisonous agents in the different varieties of snake and some animal poisons are closely related to what we now call toxalbumens—as tuberculin, for example. In Doctor Benjamin Gooch's "Medical and Surgical Observations," published in 1771, is a *résumé* of different ancient practices that had animal poisons as the basis of a rational therapeutics. One of the most interesting of his observations is in connection with a detailed description of a case of severe pain, spasms, etc., of long continuance. Doctor Gooch says: "Not to appear inhuman to so wretched a being, after telling him I could do nothing I sent him a bottle of rattlesnake wine, to take a glass of frequently. This was in the West Indies drank as the highest cordial. Three nights after, the patient walked in. 'Sir,' said he, 'you cannot be so much amazed as I am, nor half so much pleased; I am come to thank you, and if not criminal to worship you.'"

Doctor Gooch's account of the discovery of the virtues of rattlesnake wine is as follows: "A very wealthy old gentleman in the West Indies had long been afflicted with leprosy to an high degree, which was deemed incurable by his physicians. Apparently in a dying state he made his will, leaving a large legacy to a female servant who had lived with him many years. This circumstance being known to the servant, she and her paramour studied and contrived how to make away with him in such a manner as to raise the least suspicion. They put the heads of rattlesnakes into the wine he drank, thinking it would prove an infallible poison; on the contrary he grew better, and the criminals, imagining the poison was not strong enough, added more snake-venom, whereby the gentleman was restored to perfect health. Conscience finally put this servant upon her knees before her master, confessing her crime. Forgiveness was granted, and the old gentleman gave her a sum of money, ordering her to depart and never see him more."

Galen, Areteus and other ancients recommended eating vipers for elephantiasis; Dampier says the natives of Tonquin treat their friends with arrack in which snakes and scorpions have been infused, not only as a cordial, but as an efficacious remedy for leprosy.—*Maritime Medical News.*

Sleepy Grass.—

Pearson's Weekly declares that in some parts of New Mexico there grows a grass (*Stipa viridula robusta*) which produces a somniferous effect on the animals that graze upon it, notably horses, cows, and sheep. It has occasionally happened that travelers have stopped to allow horses to feed in places where the grass grew, when the animals have gone to sleep on the road, and it was hard to arouse them. The effect passes off in an hour or two, and no bad results have ever been noticed on account of it. Cattle on the ranches frequently come upon patches of this grass, where they feed for perhaps half an hour, and then fall asleep for an hour or more, when they wake up and start feeding again. The programme is repeated perhaps a dozen times, until thirst obliges them to go to water. Whether, like the poppy, the grass contains opium, or whether its sleep-producing property is due to some other substance, has not been determined.

A Female Army-Surgeon.—

The *Progrès Médical* revives the story of a woman doctor, in disguise, in the British Army, some forty years back. Scores of people in India remember the brilliant Surgeon Macleod, who was kind, grave, and well up to his work, but very reserved. This reserve so annoyed a brother officer that he twitted the Doctor with living like a woman, and got a slap upon the face in response. A duel ensued, in which Surgeon Macleod killed his opponent, and, almost immediately resigning his post, left for England, where after several years he died; and it was only then discovered that Surgeon Macleod was a woman and a direct descendant of one of the oldest families of Great Britain.—*Indian Medical Record.*

Fraudulent Iodoform Gauze.—

In the *Apotheker Zeitung* Doctor Block describes a fraudulent iodoform gauze which came into his hands through ordinary commercial sources. It purported to contain twenty per cent. of iodoform and was of brilliantly yellow color. It actually contained only six-tenths of one per cent., and the brilliant hue was imparted by auramine. To test either gauze or wadding for this shameful adulteration, which, in cases of serious surgical operations, might cost the patient his life, it is sufficient to thoroughly shake the sample in a tube of water for several minutes. Auramine will color the water yellow, whilst iodoform, of course, will not.—*Druggists Circular.*

The Jumble of Medical Terms.—

Frequent jumbling up of the microscopic and typographic significance of terms such as "descriptive" and "systematic," as well as the unfortunate grouping together under one name of a number of parts that should be *separately* referred to as having separate functions, has so often led to errors in physiological, pathological, medical and surgical parlance and reference, that the Basle Anatomical Society has appointed a committee to compile a new nomenclature which shall be comprehensive, explicit, rational, and more euphonious than is the present one, but shall be in Latin, so as to come into universal use. Such a work is urgently needed.—*Indian Medical Record.*

The Age to Marry.—

Men are encouraged to marry too young. It is a fact that between the ages of sixteen and twenty-five the voluptuous passions dominate; we are at our best, sexually, during this period of life. From twenty-five to forty we are at our best physically. From forty to sixty we are at the zenith of our intellectual powers. The man who marries before thirty, as a rule, never sees an hour beyond the nuptial couch. The man at fifty, if he be a normal man, will best impress his intellectual characteristics upon his progeny. —*Texas Sanitarian.*

Digestible Food.—

One of the biggest mistakes about food which people make is to forget that the true value of food to anybody is the measure of its digestibility. Half a pound of cheese is vastly more nourishing, as regards its mere composition, than half a pound of beef, but while the beef will be easily digested, and thus be of vast service to us, the cheese is put out of court altogether for ordinary folks by reason of its indigestibility. We should bear this rule in mind when we hear people comparing one food with another in respect to chemical value.—*Hospital Times and Gazette.*

A Fast Boy.—

In the year 1729, says *Good Health*, was recorded by the French Academy a case of a boy who at the age of *six* years attained five feet six inches in height, grew a full beard, and was able to lift a bag of grain weighing 200 pounds. Two years later he became gray. At ten his teeth fell out, his hands were palsied, and he tottered like a man of sixty-two years; later he died with all the signs of old age.—*Indian Medical Record.*

Hard to Beat.—

A St. Louis doctor, as "expert witness," testified that he had treated two million insane persons during the past thirty years; that is, 66,666 cases a year. Chicago cannot beat that, great and mighty as she is.—*Homœopathic Recorder.*

Yes—But!—

Doctor Klingensmith, in the *Medical Record*, says "we are on the threshold of discoveries in medicine, such as will eclipse all that have preceded them." Great discoveries are not more difficult than the task of beating them into men's skulls.

Skilled Labor.—

Customer: "Friend, I'm told that most prescriptions cost little or nothing to make up."

Druggist: "Yes; but we charge for deciphering the penmanship and correcting the Latin."—*Puck.*

On Them.—

Cleverton: "Did the surgeons treat you well at the hospital?"

Dashaway: "Finely. Every time they reset my leg they set up the ether."—*Judge.*

The Cause.—

One exchange says "sycosis is always caused by a microbe."

Another pertinently asks: "Well, what causes the microbe?"

Cuticura.—

This charlatanistic ointment is said to be merely petroleum jelly containing two per cent. of carbolic acid, colored green, and perfumed with oil of bergamot.

Of Course!—

Doctor: "We do not cure; Nature cures, and we only——"

Patient (interupting): "Collect the bills?" —*Puck.*

Gossips.—

All the whiskey ever made could not cause the havoc of one of these whirlwinds of iniquity.—*Californian Exchange.*

An Opportunity.—

When will some great, strong man arise and free his brothers from the tyranny of starch?—*Exchange.*

Book Reviews.

THE BADMINTON MAGAZINE OF SPORTS AND PASTIMES. Edited by A. E. J. Watson. Volume I, No. 4. Price, 30 cents; $3.50 per year. Longmans, Green & Co., New York.

The publishers of the new magazine long ago instituted what is known as the Badminton Library, devoted to all legitimate sports and pastimes. These volumes embrace large game stalking, wing and small game shooting, fishing in all its phases, golf, cricket, racing, etc.; and the final issue, now on the press, is devoted to dancing. In order to continue the series, Messrs. Longmans, Green & Co. have instituted the *Badminton Magazine* of 150 pages monthly, which in the four numbers already issued promises an entirely new style of literature possessing interest and elevation of character hitherto unapproached by any periodical of the class. Instead of being filled with wishy-washy, catchy tales, less than mediocre, disguised by cheap half-tone pictures to "make them go," each article is of the best scholarly type and is not alone superlatively interesting, but instructive as well; further, the pages are not soiled with records and tables which are of value to no one save the immediate participants. Of the standard of literature embodied, no just estimate can be formed without a perusal of the magazine itself, yet some idea may be had from the table of contents of the issue before us: "Fox-hunting," by Lord Willoughby de Broke, illustrated by Stanley Berkeley; "The Shotgun in Norway," by Sir Henry Pottinger, Bart., illustrated by A. Thornburn and N. J. Gibb; "A Night Netting," by the Honorable John Scott-Montague, M.P., illustrated by H. G. Massey, A.R.P.E.; "Among the Sea Birds," by R. B. Lodge, illustrated from photographs; "Football," by C. B. Fry; "Racing in 1895," by Alfred E. J. Watson, illustrated by G. D. Giles; "Old Sporting Prints," IV, illustrated, by Hedley Peek; "After the Wild Deer," by John Edward Moss, Bart., illustrated by Charles Whymper; "An Autumn Holiday," by Susan, Countess of Malmesbury, illustrated by Trevor Haddon; "The American Cup," by H. Horn, illustrated by R. T. Pritchell; "Notes" by "Rapier." It is needless to say every article is in the highest degree instructive, and the illustrations are each and every one the epitome of all that is best in art. No one can peruse the first four papers in this issue without a material increase in knowledge of natural history. Watson's reviews of racing at once raise in the estimation of the reader the turf of Great Britain and the character of thoroughbred horses. Finally, this is emphatically a gentleman's magazine, but will be found none the less interesting to the fairer members of the household. There certainly has long been a need for a monthly periodical of this high character and class.

THE DECORATOR AND FURNISHER. Price, 20 cents; $2.00 a year. The Art Trades Publishing and Printing Co., New York.

The October issue contains, under the heading of *House Decoration:* "An Autumn Luncheon," "Three Designs for Window Drapery," and "Art Metal Work." Under *Furniture and Furnishings* is given an illustration of "A Lady's Sleeping-Chamber," with outline sketches of wardrobes, and "Three Projects for a Bed." There are also two designs for mantels, executed by the American Terra-Cotta Co. Two interesting papers are on "China-Painting" and "Decorated Japanese Porcelain." Other excellent contributions are: "Oriental Carpets," "Persian Prayer Rug in Silk," and "Examples of Bokhara Sozinees (bedspreads).

The November number gives a "Scheme for Decorating a House" with "designs of drapery for windows of reception hall, parlor, and library;" "A Maiden's Chamber;" also "Designs in Venetian Bent Iron" for flower-stand, photograph-holder, and clock-stand. "Middle-class Furniture" in the United States is discussed, and following are "Designs (for hall clock, hall stand, settees, and hall chairs) in Carved Oak," "Chair after the Morris Ideal," "Colonial Writing-Desk," "Romanesque Chairs," "Writing-Desk on French Lines," and "Colonial Sideboard." There is also a particularly interesting paper on "The Evolution of Lamps." "An Empire Bedroom" is described, with illustrations. There is a further contribution on "Oriental Carpets and Rugs." Finally, "A Louis XVI. Bedroom" is described. There are the usual editorials.

SUN AND SHADE. Price, 50 cents; $5.00 per year. New York Photogravure Co., New York.

The November issue presents a superb *fac simile* in oil colors of Von Bodenhausen's "Hope." Then appears a photogravure taken from a photograph of Henry Ward Beecher, which is fairly lifelike. "The Old Oak," a photogravure, is from a painting by Dupré—the old tree stands alone before a darkening sky, rooted near a pool of sullen water, with only a few bushes contiguous, and is yet attractive in its declining grandeur; the conception is fine, the presentation per-

fect. "A Polish Girl" is a photogravure from a painting by Semenowsky—it is the very type of a daughter of Poland. "Prospect Park" is an oil *fac simile* representing a scene in Brooklyn's great breathing spot—the portion pictured is part of a recent acquisition of an old country mansion and grounds. "The Great Temple of Abou-Simbel" is a photogravure—from a photograph taken by Mr. Edward L. Wilson—of an Egyptian temple dedicated to the goddess Hathor; this temple is cut entirely from the side of a mountain, is of red sandstone and massive, but apparently was never finished. A photogravure of "A Fan" is an exact copy of one of these implements, painted by Watteau, now in the Metropolitan Museum of Art; it represents "Hide and Go Seek," known in French as *Colin-Maillard*. Another plate represents the front of "The Eye and Ear Infirmary," and is a photogelatin, illustrative of advanced New York architecture.

THE COSMOPOLITAN. Price, 10 cents; $1.20 a year. Cosmopolitan Publishing Co., Irvington-on-Hudson, New York.

The fiction of the December number is by Stevenson (the last story written before his death), "Ouida," Sarah Grand, Zangwill, and James Lane Allen—the latter begins a new Kentucky story entitled "Butterflies." Probably no stronger array of fiction has ever been presented in any magazine, nor has any ever had a larger number of really distinguished artists engaged upon the illustration of a single number. One is puzzled how such a number can be made at the price of ten cents, yet the magazine itself affords the solution. It contains 139 pages of advertising, which, as the publishers announce, is from $4000 to $8000 more net cash advertising than was ever before printed in any magazine, of any kind, or in any country; it breaks the world's record in the publishing business. Moreover, the cost of the artists and authors who appear in this number is divided amongst 400,000 copies, bringing the cost per copy proportionately low. *The Cosmopolitan* thinks that the ten-cent magazine, bringing, as it does, the best in art and literature to all classes, is an educational movement second in importance only to that of the public schools.

THE POPULAR SCIENCE MONTHLY. Price, 50 cents; $5.00 a year. D. Appleton & Co., New York.

David A. Wells contributes an article to the December number on "Principles of Taxation;" F. G. Wright, on "New Evidence of Glacial Man in Ohio;" James Sully, on "Studies of Childhood;" R. T. Mackenzie, on "The Anatomy of Speed Skating;" W. R. Newbold, on "Suggestibility, Automatism, and Kindred Phenomena;" Stoddard Dewey, on "Health Experiments in the French Army;" J. D. Champlin, on "Prehistoric Engineering at Lake Copais;" James Carmichael, on "Sir John Lubbock and the Religion of Savages;" L. G. Weld writes entertainingly of "The Cannibal Islands," E. Farrer of "Miracles in French Canada;" S. G. Fisher queries whether immigration has increased population; M. V. Brandicourt discourses upon "Insects' Eggs;" G. W. Littlehales tells "Why the Sea is Salt." There is a sketch of David Dale Owen and the usual Notes, Reviews, etc.

SCRIBNER'S MAGAZINE. Price, 25 cents; $3.00 a year. Charles Scribner's Sons, New York.

The Christmas number has a series of twelve full-page illustrations by Oliver Herford for a fantastic story, entitled "The Kinetoscope of Time," by Brander Matthews. "The Amazing Marriage," by George Meredith, is concluded. "A White Blot" is by Henry Van Dyke; "The Joy of the Hills," by C. E. Markham; "Wild Beasts as They Live," by Captain C. J. Melliss; "On a Forgotten By-way," by A. E. Watrous; "Starlight," by George de Clyver Curtis; "The Colonel's Nigger Dog," by Joel Chandler Harris; "Blandina," by E. S. Martin; "The Staying Power of Sir Rohan," by Frank R. Stockton; "The River Syndicate," by Charles E. Carryl; "Sing Again," by M. L. van Vorst; "The Heroism of Landers," by A. S. Pier; "Happiness," by Elizabeth C. Cardozo; "The Point of View."

THE ARCHITECT AND BUILDER. Price, 15 cents; $6.00 a year. W. T. Comstock, New York.

The issue for November 30th is exceedingly interesting. There is an editorial on "Threatened Increase of Fire Rate on Tall Buildings;" "A Discussion of Specifications from an Architect's Point of View;" "Discussion of Interior Columns;" on "Fever Hospitals;" on "Streets and Pavements;" "In Memory of R. M. Hunt;" "Legal Notes;" "American School at Rome;" "The American School at Athens;" and the usual Book Reviews, Current Notes, Correspondence, Personalities, etc. There are also some excellent plates—A Sketch for a House, an Illustration of Trinity School, New York, and Design for a Cottage at Boonton, New Jersey, besides competitive designs for the Chattanooga monument.

REVIEW OF REVIEWS. Price, 25 cents; $2.50 per year. The Review of Reviews Co., New York.

The special features of the December number are: A review of "John Sherman's Story of his Own Career," by E. Benjamin Andrews; "A Character Sketch of Herbert Spencer," by W. L. Scruggs; "An Indian on the Problems of his Race," by Simon Po kagon; and "The Cartoon in Politics," being a story of the New York campaign in outline, by Robert J. Finley. There are the usual departments devoted to: "The Progress of the World;" "Record of Daily Events;" "New Books;" "Leading Articles of the Month;" "Periodicals Reviewed;" "Contents of Periodicals;" "Alphabetical Index of Articles in November Periodicals." The present issue contains upwards of one hundred illustrations.

LIPPINCOTT'S MAGAZINE. Price, 25 cents; $3.00 per year. J. B. Lippincott Co., Philadelphia.

The complete novel in the December issue is "The Old Silver Trail," by Mary E. Stickney. Other articles are: "English Mediæval Life," by Alvan F. Sanborn; "Where the Clues Met," by H. S. Edwards; "Gunning for Gobblers," by W. C. Elam; "Three Fates," by Virna Woods; "Orchids," by Lawrence Irwell; "The End of Captain Ferguson," by Beulah M. Dix; "Japanese Sword-Lore," by L. H. Weeks; "Athletic Sports of Ancient Days," by T. J. de la Hunt; "Bennett's Partner," by J. K. Reeve.

LITTELL'S LIVING AGE. Price, 15 cents; $6.00 per year. Littell & Co., Boston.

The announcement of a reduction in the price of this famous eclectic from *eight* to *six* dollars a year for 1896 will prove of more than usual interest to lovers of choice literature. Founded in 1844, it will soon enter its fifty-third year of a continuous and successful career seldom equaled. It is the oldest standard weekly, as well as the best, and those who desire a thorough compendium of all that is admirable and noteworthy in the literary world will be spared the trouble of wading through the sea of reviews and magazines published abroad; for they will find the essence of all compacted and concentrated here. It brings together between its own covers the choicest current productions of the most brilliant writers, the best scholars, the most profound thinkers of the world.

The essential features which have characterized the magazine and made it so desirable heretofore will be preserved during the coming year, and the same efforts continued to maintain the splendid record it has made in the past.

To those whose means are limited it must meet with especial favor, for it offers them what could not otherwise be obtained except by a large outlay. Intelligent readers who want to save time and money will find it invaluable, for it furnishes the greatest amount of the best reading for the least money that one can anywhere find.

THE ATLANTIC MONTHLY. Price, 35 cents; $4.00 a year. Houghton, Mifflin & Co., Boston.

Conspicuous among the contents of the December *Atlantic* is another of John Fiske's historical studies, "The Starving Time in Old Virginia;" "Witchcraft" is by L. Dougall; "The End of the Terror," by Robert Wilson; and "Dorothy," by Harriet Lewis Bradley. Other articles of interest are: "A New England Woodpile," by R. E. Robinson; "The Defeat of the Spanish Armada," by W. F. Tilton; "An Idler on Missionary Ridge," by Bradford Torrey; "Being a Typewriter," by Lucy C. Bull; "Notes from a Traveling Diary," by Lafcadio Hearn; "To a Friend in Politics." There are further chapters of Gilbert Parker's powerful serial, "The Seats of the Mighty." Book reviews and the usual departments complete the issue.

GODEY'S MAGAZINE. Price, 10 cents; $1.00 a year. The Godey Co., New York.

The December number is notable with Yule-tide fiction and verse, besides such seasonable articles as "Holiday Decorations," "Christmas, Past and Present," and "Christmas Day in a Japanese Go-down"—the latter richly illustrated by C. D. Weldon. Beaumont Fletcher's dramatic critique discusses the fine points of "Hamlet" as rendered by the great actors of historic and contemporary fame. The musical article treats of H. W. Parker's compositions. "A New School of Portraiture on Wood," and "Masterpieces of French Sculpture," are two lavishly illustrated art articles. Liberal space is given to the Fashion Department.

PHYSICIAN'S VISITING LIST FOR 1896 Leather; 24mo. P. Blakiston, Son & Co., Philadelphia.

This well known Visiting List presents several improvements in the new edition for 1896—more space has been allowed for names and memoranda, and columns have been added for the amount of weekly visits and for the ledger page. Lists for seventy-five and one hundred patients will hereafter be offered in two volumes only—one dated from January to June, the other from July to December.

SCOTTISH FOLK-LORE; OR, CHRONICLES OF ABERDEENSHIRE FROM PINAFORE TO GOWN. By Reverend Duncan Anderson, M.A.

This work is announced by J. Selwin Tait & Sons, and by permission is dedicated to the Earl and Countess of Aberdeen. The Aberdeenshire people are hard-headed folks, and it is said that, wealthy though their city is, it is the only one in the United Kingdom where the Jews cannot earn a living. The volume is full of humor, but it is also a true chronicle of very interesting events.

How Canada is Governed. By J. G. Bourinot, C.M.G., LL.D., D.C.L., D.L. Cloth; 8vo; pp. 350. Price, $1.00. The Copp, Clark Company (Limited), Toronto.

The arrangement and style of this work are admirably calculated to simplify the subject and make of the volume what it really is —a hand-book of most practical value. There is not a chapter without noteworthy features, and we cordially recommend it as a book desirable to every individual who aspires to be a student of the science of government. The very fact that the editor is clerk to the Canadian House of Commons, and has already won fame by his manuals of "Constitutional History" and "Parliamentary Practice and Procedure," is evidence of the class, character and accuracy of the text. The eight chapters deal respectively with: Growth of the Constitution; Imperial Government; Provincial Governments; Municipal Government in the Provinces; School Government in the Provinces; Government in the Northwest Territories; Constitution of the Dominion of Canada; and Appendix. There are also a number of illustrations which have never before appeared in any volume, notably Autographs of Queen Victoria; Champlain, Governor Murray, and Lord Durham, Delegates to Quebec Conference in 1864; Governor-Generals Since 1867; Bishop's Palace, Quebec; First Parliament Buildings, Toronto; Nova Scotia Province Building; Prince Edward Island Province Building; Legislative Building, Newfoundland; Dominion and Provincial Coats of Arms; Parliament Buildings, Ottawa; Interior of the House of Commons; New Dominion Ballot Paper; Parliament Buildings, Toronto, Quebec, Fredericton, and Victoria; Osgoode Hall and New City and County Buildings, Toronto; Montreal City Hall; New Upper Canada College, and other school buildings, etc., etc.; likewise a most excellent map of the Dominion. This volume, moreover, is of great interest to citizens of the United States for comparing its federal form of government with that of the Dominion of Canada.

The Royal Natural History. Edited by Richard Lydekker. No. 1, Volume II; pp. 96. Price, 50 cents; $11.00 per year. Frederick Warne & Co., New York.

The issue for August 1st, 1895, deals with the various species of bears, raccoons, weasels —the latter including skunks, gluttons, ferrets, badgers, polecats, ratels, and otters,— and as is usual is beautifully illustrated with plates, including two colored full-page portraits of the European otter and the white-nosed coati.

The part for August 15th (No. 2) continues the natural history of the otters, and takes up the different species of seals, eared seals and walrus. Chapter XXII begins with the order Ungulata, or hoofed mammals, the hollow-horned ruminants being first described. Under the family *Bovidæ* is given a very complete history of extinct forms of cattle, and the gradual development of the present hoof. First comes the auroch, or ancient wild ox of Europe, which is not yet altogether extinct; then are taken up the domestic forms of the genus *bos*, in which the different breeds of cattle are described; then follow the humped cattle—the East Indian bull, galla bull, gaur bull, gayal, banting or Javan ox.

Each new part of this work is a surprise because of its clearness, its perfection, and its cheapness. No one interested in natural history can afford to be without it, and we wish it may find place in every school as well as every home library.

The Phrenological Journal. Price, 15 cents; $1.50 a year. Fowler & Wells Co., New York.

Contributions to the November number are: "Madam Janauschek," by E. C. Beall; "How Three People Did Europe Afoot," III, by George C. Bartlett; "Phrenological Problems," by C. M. Aley; "Temperament and Teeth," by A. R. Lawshe; "Practical Psychology," by H. S. Drayton; "Child Culture;" "Science of Health;" "Notes on Anthropology," etc.

The Medical Record Visiting List for 1896. 32mo; seal-grained leather. Price, thirty patients per week, $1.25; fifty patients per week, $1.50. William Wood & Co., New York.

This list is gotten up more attractively than ever, and has assumed a form more suitable for the pocket. Those who have used it hitherto will undoubtedly appreciate its revised form.

American Year Book of Medicine and Surgery. Edited by George M. Gould, A.M., M.D. W. B. Saunders, Philadelphia.

This work, which will be replete with original and selected illustrations skillfully reproduced from the studio of the publisher, will present a complete epitome of medicine and surgery during the year 1895, Doctor Gould being assisted by many eminent American physicians and teachers.

This is a new departure in publishing, the success of which we bespeak in advance. Such a volume will meet a deficiency in medical literature that can only otherwise be met by current publications, which means an amount of periodical literature beyond the reach of the majority of practitioners. This work places before the physician in convenient form an epitomization of medical literature during the preceding twelve months. The volume will be ready January 1st.

Therapeutic Brevities.

Significance of Vaginal Discharges.—A leucorrhœa inodorous, or of mild odor, persisting during the climacteric, accompanied by increasing hæmorrhage, is suspicious, and demands investigation:

If profuse, of peculiarly fœtid odor, grumous, excoriating, appearing early or late during the climacteric, with profuse hæmorrhage, it is reasonable evidence of cancer of the cervix:

When moderate in amount, ill-smelling—the peculiarly fœtid odor of cancer of the cervix being absent,—accompanied by hæmorrhage, it suggests cancer of the uterine body:

Accompanied with hæmorrhage, containing material like the washings of meat, it is said to indicate sarcoma:

A watery discharge, as a rule, occurring during menstruation, odorless or of little odor, persisting, accompanied by profuse hæmorrhage, indicates fibroids; with little or no hæmorrhage, polypi:

Profuse bloody discharges coming on gradually with declining menstruation, ceasing usually with the menstrual flow, point to fibroids:

Persistent profuse discharges of blood occurring spontaneously, arising from sudden exercise or coition, occurring, as a rule, after the menopause, indicate cancer:

The early recognition of malignant disease, the possible prevention, by administration of drugs, of that fatal exhaustion which accompanies it, and the application of those methods which, in a measure, may be supposed to offset the terrific drain on the nervous system—inasmuch as present experience shows that early removal of diseased tissue prolongs life,—and the importance of early diagnosis and treatment, can hardly be overestimated.—Doctor Mish, in *Pacific Medical Journal.*

Normal Liquid Coca.—Since the discovery of the anæsthetic properties of the alkaloid cocaine, coca itself has received increased attention. Many new preparations have from time to time been suggested or prepared, each having as its object the presentation of the drug in such a form that its full effect might be obtained. That all of these are improvements on the old form in which it was and still is administered, viz., the fluid extract, we would by no means say. But one preparation, which owes its introduction to the stimulus above mentioned, well deserves notice in this connection. The preparation we refer to is the "*normal liquid coca*," of which the makers claim that in its manufacture is used only a leaf that by previous assay has been shown to contain a certain percentage of the alkaloid cocaine, and furthermore that the resulting product is brought to a certain standard by another determination of its alkaloidal strength: which strength, and a method of verifying it, are designated on the label accompanying the package.

This method of rendering exact and reliable preparations which hitherto have been characterized by more or less variability and uncertainty, cannot be too much encouraged, and the firm that introduces them should be rewarded for their efforts by unmistakable evidence of our appreciation.—*Louisville Medical News.*

The Use of Corn Silk.—This is one of my prize remedies in bladder troubles. It is of the greatest use in chronic cystitis—male and female,—prostatitis, catarrhal inflammations, and cases of cystitis and prostatitis of the chronic kind; especially in old men when these are sequels to gonorrhœa the remedy affords excellent satisfaction. It is of great value in irritable bladder of women, particularly during pregnancy. Some women have frequent calls to urinate, passing but a few drops at a time, often so very painful as to disturb digestion, prevent sleep, induce nervous symptoms, piles, pains in the pelvis and back, often marked anæmia, and quite often bearing-down pains—a train of symptoms not infrequently mistaken for disease of the pelvis, uterus, etc.; these I treat successfully with Corn Silk. Likewise cystic and renal maladies brought on by the use of turpentine, potassium iodide, and stimulant diuretics; also disturbance of the nervous system such as congestion of the lower cord or base of the brain, injury to back, excessive coition, and excitement in excess. Again, Corn Silk is worth trying in chronic ague; it is often quite successful after quinine and other antiperiodics have failed.—Joseph Adolphus, in *Georgia Eclectic Medical Journal.*

Poisonous Effects of Borax.—The extensive use of compounds containing borax, which under various names are sold for preserving foods, lends a special interest to some observations of Doctor Ch. Féré, of Paris, who has used the drug in the treatment of intractable cases of epilepsy, and with some success. For this purpose it was necessary to give large doses for long periods, but in the course of the trial he met with a considerable number of persons who were peculiarly susceptible to the remedy.—Loss of appetite

was succeeded by burning pain in the pit of the stomach, dryness of the mouth, and eventually by nausea and vomiting. Borax produces also a remarkable dryness of the skin, which is found to favor, if not to cause, various skin diseases, especially eczema; the hair also becomes dry, and may fall out, causing complete baldness. The most dangerous property of biborate of soda, however, is its power of producing kidney disease, or of converting a slight disorder of the kidneys into a fatal malady.—*British Medical Journal.*

Easy Method of Circumcision.—Retract the foreskin; insert the glans penis up to the corona into the open mouth of a glass test-tube; draw the foreskin well forward over the end of the tube; tie a strong, small silk cord very tightly around the foreskin immediately in front of the flange of the tube; amputate the foreskin one-eighth of an inch in front of the constricting cord by a circular sweep of the knife; unite the mucous and cutaneous edges of the stump of the prepuce by eight or ten fine interrupted sutures; cut the constricting cord; remove the tube; cover the cut edges well with powdered iodoform; encircle the anterior half of the penis with a roller bandage of iodoform gauze, allowing the meatus to project slightly for facility of urination without soiling or removal of the dressing; and keep the patient in bed, with the penis elevated, for from twenty-four to forty-eight hours.—Doctor John W. Ross, U. S. Navy, in *Medical Record.*

Cerebral Compression.—Victor Horsley advances the opinion that cases of cerebral tumor, depressed fracture, and sudden and violent concussion, especially when applied in the occipital region, die from failure of respiration, and not, as is often surmised, from failure of heart. He says: "Of all the lower nerve centres which are necessary to the functions of so-called organic life, the respiratory centre is the most sensitive to mechanical pressure and shocks. In cases of apparent death from intra-cranial pressure, artificial respiration should be immediately performed, and the skull opened freely at once; in cases of sudden shock, artificial respiration should be directly instituted, and in every case heat should be applied to the head, preferably by irrigation."—*Alienist and Neurologist.*

Tartar Emetic in Tedious Labor.—Tartar emetic is positively oxytocic, a something long looked for. It almost usurps the place of forceps—is a great aid to them when necessary; it casts into oblivion dilators—instruments of torture; and the inhalation of chloroform or ether may also be numbered with the things of the past. The emptied bladder, the washed-out rectum, are two cardinal points in delivery; and third, the emptied stomach enables a certain stage of labor to progress rapidly, as well as favorably. Also in case of rigid os or rigid perineum, ten grains of the drug are dissolved in one-half tumbler of water, and of this two teaspoonfuls are given every ten or fifteen minutes, until free emesis is produced. This is followed by perfect relaxation, without any diminution of the expulsive efforts; in fact, these are intensified without any unpleasant effect either on the mother or the child.—Doctor de Mund in *Medical Record.*

Calomel as a Substitute for Iodoform.—An Italian physician, Doctor Percacini, replaces iodoform by Calomel for dressing all kinds of wounds and sores, more particularly ulcers of the leg, as well as eczemata resisting ordinary treatment. When applied, in the form of powder, to a wound which has first been thoroughly cleansed, this substance forms an antiseptic crust, strongly adherent, and when this becomes detached the wound is found to be completely cicatrized. According to Doctor Percacini, the use of protochloride of mercury for dressings is contra-indicated only in cases of wounds and sores with excessive secretion, seeing that in such cases the pus would be retained under the crust formed by the powdered Calomel.—*North American Practitioner.*

Remedies in Typhoid Fever.—Doctor Jousset, of the Hôpital St. Jacques, Paris, records the following as the principal remedies in the treatment of typhoid: Muriatic Acid when there is exaggerated temperature, diarrhœa, and involuntary stools; Phosphoric Acid when there is general weakness and diarrhœa made up of colorless fluid; Belladonna in delirium, agitation, red and congested face; Stramonium and Vegetable Charcoal he considers valuable, and that Ipecac is the best possible remedy in hæmorrhages, administered in minute doses frequently repeated.—*Journal Belge d'Homœopathie.*

Nuclein in Fever or Toxæmia.—Doctor William Jacobson has used this drug in the treatment of scarlet fever, measles, diphtheria, and follicular amygdalitis, and believes it exerts an immediate positive influence on the

toxins in the system. So far as immunization is concerned, experiments have been made only in diphtheria, measles, and scarlet fever, which apparently can be prevented. Failures may occur when the organism has become thoroughly saturated with the poison, and Nuclein, which is Nature's antitoxin, cannot overcome the poison. When the case is severe, one is not justified either in depending upon Nuclein alone or in doing without it. Careful hygiene, diet, and watchfulness of the attendants, will assist in saving the patient.—*New York Medical Journal.*

Sodium Chloride for Relief of Pain.—In five adult cases of face-ache from decayed teeth, insufflation of Sodium chloride into the nasal cavity caused the pain to disappear at once. Numerous cases of severe headache, without regard to cause, and two cases of earache which did not call for more special treatment, yielded immediately to this remedy. A physician, complaining of headache and painful feeling of strain of the eyes, due to reading and work with the microscope, was promptly relieved by the insufflation. The dose employed was two to four grains of finely ground table salt, blown into the nose just after an expiration. —*Quarterly Medical Journal.*

Cantharis in Hæmaturia.—After the acute stage is passed, and but little albumen and blood remains in the urine, the tincture of Cantharis will be found very useful—one to three minims every three hours. Likewise in cystitis where there is inability to retain urine; and in ordinary incontinence of urine. Drop doses three times daily often relieve chordee. The remedy seems to directly cause determination of blood to the ovaries and uterus, which suggests a place for it in gynæcological therapeutics.—*The Clinique.*

Chancroid.—Touch the ulcer every morning for two or three consecutive days with a pledget of absorbent cotton dipped in the following solution:

℞ Menthol, 3 grains.
Carbolic acid, 15 grains.
Alcohol, 90°, 4 drachms.
M.

In the meantime keep the sore covered with iodoform.—*La Tribune Médicale.*

Varicose Veins and Ulcers.—In a paper read before the British Homœopathic Society, Doctor Washington Epps recommends Fluoric Acid in the treatment of varicosities. He quotes Doctor Herring as declaring that varicose veins under the action of this remedy have sunk to half their size. Doctor Epps further points out that Fluoric Acid has a direct action on the tissues of the veins, and that cases which appear to be most benefited are of the most chronic character.—*Medical Century.*

For Flatulent Dyspepsia.—The old "Mistura Thomsonii:"

℞ Soda bicarbonate, 20 grains.
Aromatic spirit of ammonia, 15 minims.
Compound tincture cardamom, 20 minims.
Compound tincture camphor, 20 to 30 mins.
Peppermint-water, to make 1 ounce.

Take this at a draught every four hours.

—*Quarterly Medical Journal.*

Thyreoidin for Uterine Fibroma.—At a recent meeting of the Académie des Sciences, M. Jouin declared he had employed Thyreoidin for patients suffering with fibrous tumors of the uterus: In three instances there was marked diminution of hæmorrhage, and in two others partial disappearance of the tumor.—*Exchange.*

Gonorrhœa in Women.—Employ irrigation with a solution of Potassium permanganate of the strength of one to 2000, or one to 1000, according to the case. The quantity used at each irrigation, which must be practiced every day, should average about one quart.—CUMSTON.

Nuclein.—I have repeatedly tested this agent in pneumonia, pleuritis, and other inflammatory and infectious diseases, with most satisfactory results. Even in three cases of alcoholic and albuminuric pneumonia a manifestly favorable influence was exerted.—GERMAIN SÉE.

Psoriasis Treated by Copaiba.—In the *Therapeutic Gazette*, Doctor Abbott Cantrell advises five-minim capsules of the oil of Copaiba to be taken three times daily in connection with good nourishing diet, and free access to open air.—*New York Medical Journal.*

Anarcotine.—This is one of the alkaloids of opium, and is devoid of narcotic properties. Doctor William Roberts calls attention to it, and says that it ranks next in value, as an antiperiodic, to quinine. The dose ranges from *one* to *three* grains.—*Medical Record.*

Medical Progress.

THERAPEUSIS AND MODERN BACTERIOLOGICAL THEORIES. — At present all our efforts are concentrated upon combating disease by microbes, microbial products, or fluids derived from animals refractory to microbes. I am of opinion that, in cases where these efforts prove successful, the part played by bacteriology is very small, and that temporary or permanent reaction of the organism is by far the most important factor. This brings us back to a genuinely medical theory, which, as has been suggested, is apt to be lost sight of in the eager pursuit of new facts.

The substance which, after infectious diseases, gives to the serum of affected individuals not bactericidal but antitoxic properties, is also elaborated by animal cells, the nutrition of which has been permanently modified by the temporary passage through them of vaccinating bacterial substances. This is the second feature of sero-therapy which so far, in its application to human patients, has given the most brilliant results.

Behring and Kitasato in 1890 reported experiments in sero-therapy which, in spite of their great analogy with my own, differ in the manner of action of the serum, which in their hands proved effective in such small doses that there can be no question of a bactericidal action. These serums do not kill the microbes, and do not interfere with their secretion, but assist the nerve-cells, and perhaps other cells, in resisting the action of the toxins, or of those among them which paralyze the natural defenses of the organism against a microbial invasion. The antitoxic action is not due to a substance existing in the blood, nor to a peculiar chemical condition in the blood-plasma, but the blood or its plasma, or some constituent parts of this plasma, may acquire the property of stimulating organic actions which naturally protect the organism against certain poisons. We already recognize two varieties of such organic action: one consists in the destruction and chemical transformation of toxic substances, the other being a stimulation at a distance of those portions of the nervous system which the toxins tend to paralyze.

Many tissues arrest poisons; the liver and supra-renal capsules not only arrest but destroy them. The liver is the great destroyer of poisons, as the muscles are of glycogen, and cells generally of albumen.

Ferments exist everywhere in the organism; secreted by the cells, they are found in these cells or are discharged toward the outside, frequently differing and sometimes even antagonistic, according as they exist in or outside the cell, or according as they escape at one or the other pole.

Four fermentation processes at least are necessary to change the albumen of food into cellular albumen, viz.: peptonization, in order to pass through the intestinal epithelium; immediate change back to albumen on the other side of this epithelium; another peptonization in order to penetrate into the cells; and transformation once more into albumen in the interior of the cell. Each of these successive albumens differs from the preceding. All albuminoids contained in food are reduced to three varieties of albuminoids in the blood. Serum-albumen and serum-globulin acquire in the cells widely different characters. This constitutes the stage of organization and assimilation, which is followed by the stage of destruction and disassimilation. Other ferments then accomplish other fermentations; it has been proved that a peptonization of disassimilation takes place in certain cells and in certain pathological conditions, in which formative as well as destructive processes are stimulated into greater activity, resulting in setting free the cell-albumen. It is quite exceptional and purely pathological, however, for these peptones of disassimilation to persist as such outside the cells, being, as a rule, converted into unstable albumens, or albumoses, destined to rapidly undergo new fermentations, transforming them into alkaloids, amides, or ammonia Lastly, these various products of disassimilation are taken up by other cells, those of the liver and kidneys, where they undergo a final fermentation, which reduces their toxicity to a minimum, renders them dialyzable, and converts them into urea, uric acid, etc., while the non-nitrogenous products resulting from the disintegration disappear by oxidation. The activity of the cell in respect of elaboration of matter consists in placing in contact with the substance to be elaborated a ferment which determines disintegration, hydration, and dehydration in the cell or in its neighborhood. Elaboration is not in itself a vital process, the only vital act being the formation of the ferment resulting from disintegration of the living molecule at the moment when it ceases to live. This holds good of diastases and other reducing substances, as also of diethelene, the powerful oxidizing action of which has been clearly established.

Such is the complete cycle of nutrition, at any rate considering exclusively albuminoid food substances, and of these only such as are destined to become a constituent part of

cells, leaving out of the question all but nitrogenous excreta.

It appears, therefore, that the great advance which has been realized in therapeusis fits naturally into the old system of medicine, and that the new remedies, like the old ones, have no other effect than to stimulate *vis medicatrix naturæ*. — Professor Ch. Bouchard, before the French Congress of Internal Medicine.

Phlegmon of the Posterior Mediastinum.—A young woman began to suffer severe pain five days after her œsophagus had been catheterized; the neck was swollen, the breath fœtid, and the general condition alarming. An incision was made along the sterno-mastoid muscle, as in œsophagotomy, and fœtid pus issued in large quantity from in front of the vertebral column. A bone which had perforated the œsophagus was detected and extracted by the finger. The entire posterior mediastinum was filled with pus.

A drainage tube introduced in the ordinary way acted badly. The patient was therefore put in the Trendelenburg position, but though the evacuation proceeded satisfactorily the position could not be long endured, consequently resort was had to the siphon; improvement thereupon proceeded rapidly. The patient grew stout; her appetite was excellent, and soon only a small fistula remained at the root of the neck; she then insisted on leaving the hospital, and remained quite well for more than a month, after which fever, shivering, etc., returned. It was then desired to open the posterior mediastinum, but the patient declined, and in course of time succumbed. The autopsy revealed a large purulent focus in front of the vertebral column, a purulent pleurisy on the right side, and gangrene of the lungs. These septic accidents would not have occurred if I had dared to drain the posterior mediastinum through and through. The existence of the fistula, and the persistence of the focus of infective mediastinitis, exposed the patient day by day to the risk of septic processes which ultimately destroyed life.—Ziembicki, in *La France Médicale.*

A Permanent Dry Brain Preparation.—As soon as possible after removal from the cranial cavity, the brain is stripped of its membranes and placed in a saturated solution of perchloride of mercury (seven and a half per cent.), care being taken to avoid distortion of its configuration. In this solution it is allowed to remain for forty-eight hours, at the end of which time its shape will be fixed.

Wash in water, and then harden in methylated spirit for from three to five weeks.—It is better that the spirit be changed two or three times during this period.

When quite firm, immerse in oil of turpentine, and place for three days in an incubator heated up to 45° C.

Then immerse in melted Cambridge soft paraffin, and allow to remain in the incubator just above the melting-point of the paraffin for from four to five days.

Extract, cool in water, clean away all the paraffin from the surface and sulci of the preparation, and finally apply a thick coat of spirit varnish.

The brain can then be freely handled, and may further be painted with the usual mixture of oils, colors, turpentine, and gold-size. —Alfred W. Campbell, in *Liverpool Medico-Chirurgical Journal.*

The Microbe Man.—This ubiquitous pretender is autocratic in government and determined in his intentions. And through his favorite ministers the dictum has gone forth, and the temple reared by the fathers, the pride of generations and dedicated to truth, must fall, its altar desecrated and its book of the law trampled in the earth, and the devotees of medicine must worship at the shrine of bacteriology. Ancient customs must be changed. The mouth of the coy and innocent maiden, declared by poet and lover to be a beautiful laboratory, with approach guarded by gateway of pearl and battlements of ruby, and walls studded with cryptic chambers in which are distilled delicate perfumes, sweeter far and more sought after than the ambrosial dew in favor with the gods, is transformed into a horrible cave from which emanates poisonous vapor, more disastrous in effect than a breeze wafted from the far-famed upas tree of mystic lore.—H. D. Hill, in *Kansas City Medical Record.*

Cause of Murmurs in Heart and Vessels.—It is well known that current explanations of the cause of cardiac and vascular murmurs, in works on physical diagnosis, ascribe these to eddies in the blood-current, although Kiwisch and Weber long ago showed they must be due to vibrations in the walls of the vessels (or in the valves). This explanation is also given by Fick in his recent "Lehrbuch der Medicinischen Physik," and there have always been a few clinicians who have

held to this theory, though perhaps unable to give any reason for it. Recently Geigel (*Virchow's Archiv*, bd. 140, heft 2, s. 385) has investigated the matter according to well known facts in physics. Assuming with Funke that the first sound of the heart corresponds to sound-vibrations at the rate of 200 per second, a murmur of the same pitch would require for its production, if due to eddies, a tube (the heart) one meter and fifty centimeters long. This shows the fallacy of the eddy theory, and leaves the theory of lateral vibrations in the walls or valves, due to the friction of the blood, the only rational one.—*American Journal of the Medical Sciences.*

Cramps as a Sign of Diabetes.—Diabetic cramps in the lower limbs are painful but not of long continuance; they occur principally in the muscles of the calf, but may also involve other leg-muscles or even distant muscles, and are most common at night. In conjunction with this condition there is sometimes a painless motion or twitching of the leg-muscles, observable mostly in the early morning after good sleep, and lasting two or three hours, but passing away during the day. These movements may number thirty or forty in the minute.—Sir B. W. Richardson, in *Asclepiad.*

Lung Gymnastics.—In athletic exercise the lungs increase by the filling-out of certain air-cells ordinarily inactive, which only come into play during forced inspiration. The expansion of the pulmonary vesicles is complete in proportion to the quantity of air introduced. The atmospheric air, drawn into the lungs by a very powerful inspiration, seeks out the most obscure corners and inflates the air-cells of certain regions which ordinarily have no part in the respiratory function. A definite increase in the volume of the lungs is the consequence of frequent repetition of this supplemental respiration. — *Medical Gleaner.*

Peptone and Coagulation. — Injection of a solution of peptone into the veins of a dog renders the blood incoagulable for a longer or shorter period, and it has been stated by Fano that this action is not direct but is caused by a substance formed by the peptone in the organism. Experiments conducted by Clay and Pachon show that the liver plays a preponderating part in the formation of the anti-coagulating substance which is formed in the organism under the influence of the peptone. — *Pharmaceutical Journal and Transactions.*

Substitution of the Fibula for the Tibia.—M. Poirier presented to the Surgical Society a child in whom he had been obliged to remove the whole of the diaphysis of the tibia, for osteomyelitis. He then sawed through the fibula at its upper part, on a level with the neck of the bone, and brought it in contact with the spine of the tibia which had been left behind. Six months later he did the same thing with the lower end of the fibula. The fibula thus became the tibia, and the child has a very firm leg and walks well. —*Gazette des Hôpitaux.*

Implantation of Severed Ureter in Bladder.— Pozzi, in the *Medico-Surgical Bulletin*, remarks he accidentally divided the left ureter near its vesical end during the removal of a cyst of the broad ligament, and at once secured it by sutures in a small incision made in the bladder at a higher level. Union was obtained, and during a second laparotomy, nine months later, he was able to prove that the implanted ureter was normal, except for a slight dilatation. — *Maryland Medical Journal.*

Casein of Milk.—Wroplewski has made researches into the comparative properties of casein in woman's and in cow's milk. The casein is different in the two kinds of milk. In woman it contains less carbon, nitrogen, and phosphorus, but more hydrogen and sulphur. The solubility of the casein differs, and different chemical changes go on when cow's or woman's casein is submitted to gastric digestion.—*Medical and Surgical Reporter.*

Hypertrophied Tonsils.—The action of the tensor and levator palati muscles, which largely control the air supply of the middle ear, is interfered with by the pressure of hypertrophied tonsils, thus causing impairment of hearing.—*Medical Record.*

Test for Diabetes.—Give the patient 100 grains of grape sugar, which in the normal subject has no effect, but in the incipient diabetic produces glycosuria.—Van Noorden.

The Medical Age.

VOL. XIII. DETROIT, DECEMBER 26th, 1895. NO. 24.

Original Articles.

GRANULAR CONJUNCTIVITIS.*

BY ALBERT E. BULSON, JR., B.S., M.D.

So much has been written about granular conjunctivitis—or trachoma—that it would seem as if every practitioner of medicine ought to be thoroughly acquainted with its ætiology, symptomatology, diagnosis, and treatment; and yet the disastrous impairment of vision frequently seen as a direct sequence, leads to the belief that many either do not recognize the importance of early and proper treatment, or at least fail to apply the latter intelligently.

The typical acute granular conjunctivitis is a malady somewhat rare in this country, but usually arises under the same conditions as the chronic form—*i. e.*, bad hygienic surroundings, as in institutions where the inmates are crowded; it is often confounded with the violent exacerbations to which the chronic form is liable. Chronic granular conjunctivitis may be a sequel to the acute form, though it usually occurs as a primary disorder without any antecedent inflammation and appears so insidiously that its real nature is for a time unrecognized. That it originates by infection and produces an infectious, purulent secretion, appears to be well established. As infection occurs only by transference of secretion from one to another by means of fingers, towels, handkerchiefs, sponges, etc., it is readily understood why it appears most frequently among those of slovenly personal habits. Crowded dwellings, tenements, boarding-houses, schools, and penal institutions, etc., are favorable places for its development; and here when once established it spreads extensively. In the smaller cities and towns it is chiefly found among the poorer classes, those who pay little attention to cleanliness.

Many claim some peculiar dyscrasia predisposes to this malady, since certain people—such as the Jews, Irish, Italians, Orientals, as well as the Indians—are especially liable thereto: yet it would seem as if a satisfactory explanation existed in the fact that these classes, in their lower grades, are noted for lack of personal cleanliness. Again, the disease is more apt to attack those living in damp places, for high altitudes confer comparative immunity.

Many forms of granular conjunctivitis are recognized, each distinguished by some peculiar clinical feature, but for practical purposes two divisions only are necessary, viz., the papillary and the follicular.

Papillary trachoma often succeeds acute conjunctivitis, and consists in the development of transparent granules about the size of rapeseed or less, which develop exclusively in the tarsal conjunctiva and are unattended by any great amount of inflammation or discharge; this stage may last for months and be subject to innumerable variations, and eventually terminate in the second form, when the follicles become larger and more numerous and the mucous membrane thickened and highly congested; there is also much irritation, purulent or muco-purulent secretions, photophobia, pain; and, finally, if unchecked, corneal complications occur that constitute the most deplorable of all the features of this condition.

The sequelæ of follicular conjunctivitis are most familiar, especially to ophthalmologists, who are more often, perhaps, consulted therefor than for the primary malady. If follicular degeneration has not progressed to cicatrization, the evil results will be seen chiefly in the vascular and ulcerated condition of the cornea; but if such changes become estab-

* Read before the Steuben County (Indiana) Medical Society.

lished, there is added trichiasis, entropion, symblepharon, atrophy of the conjunctiva, and permanent changes in the transparency and curvature of the cornea.

Under the most favorable circumstances, well established granular conjunctivitis is a tedious disease, and one that greatly endangers vision; relapses are frequent, and the disorder is liable to assume an intense inflammatory character that in a few days may result in the destruction of the already diseased and weakened cornea. The contagious character of the affection renders it especially dangerous in public institutions or where a large number are gathered together, though, if taken in time, vision can usually be preserved; unfortunately the majority have not the patience to persist in the thorough treatment that is essential to safety and succor.

Acute granular conjunctivitis, attended by chemosis, pain, lachrymation, and congestion, must be managed upon the same principles which govern the treatment of acute conjunctivitis, soothing lotions constituting the principal treatment.

The papillary form of chronic granular conjunctivitis, so common as a sequel of simple acute conjunctivitis, demands moderation in treatment. If the granulations are accompanied by slight congestion of the conjunctival membrane, and discharge, solutions of nitrate of silver, five to ten grains to the ounce, will produce satisfactory results. If the granulations are unaccompanied by marked congestion or discharge, alum or sulphate-of-copper crystal will prove most beneficial, applied carefully as often as every other day.

Typical follicular or trachomatous chronic granular conjunctivitis, with conspicuous lymphoid infiltration, is treated either by local application of caustics and astringents, or by operative procedures.

Of local applications, solutions of bichloride of mercury, of nitrate of silver, or of cupric sulphate in crystal form, are deserving of favor. Bichloride solutions (1 to 300 or 500) and sulphate-of-copper crystals are most beneficial in cases having little or no purulent discharge, while solution of silver nitrate (five to twenty grains to the ounce) are particularly adapted to those in which discharge is one of the prominent symptoms. Application of any one of these agents is attended by a certain amount of pain and reaction, which should be controlled by cold fomentations or compresses.

By far the most effective treatment is that which has for its object the eradication of the granulations or follicles by operative procedures. When the granules are distinct and separate, they may be picked out by means of a fine needle, or destroyed with a fine-pointed galvano-cautery needle, the parts having previously been anæsthetized by a five-per-cent. solution of cocaine. If the granulations are so prominent and numerous as to make a redundant mass, which appears in corrugations and irregular elevations when the lid is everted, the patient will be most expeditiously and effectively relieved by squeezing the lymphoid infiltration out with suitable instruments. The roller forceps advocated by Knapp are admirably adapted for the purpose, and at one sitting all the morbid material can be thereby removed. Immediately after the operation, cold compresses, saturated in bichloride solution (1 to 6000), should be applied to subdue inflammatory reaction, and after the acute inflammation has subsided the subsequent treatment will consist in the application of mild astringents, such as alum crayon or tannin solution.

Much has been written regarding the disastrous results following operative procedures with roller forceps, but I feel satisfied that the procedure is attended by no ill-effects if properly and judiciously employed. Great care must of course be exercised in the selection of cases for operative procedures, as also in the treatment to subdue inflammatory reaction directly dependent upon the trauma. The operation has been attended by satisfactory results in every instance in which I have employed it, always cutting short a treatment that, by the older methods, would have occupied many months and perhaps years of time; and unquestionably many of the complications that attend the disease have been forestalled by the early eradication of the irritative element upon which such complications depend.

In no instance have I employed the roller forceps for the removal of discrete granulations, the operative treatment in such cases

being confined to the fine-pointed electro-cautery needle, which I consider of utmost efficiency.

The roller forceps are also *not* adapted to that form of trachoma in which there is a uniform thickening of the parts without marked lymphoid infiltration. In this class of cases the treatment should consist of applications of solutions of silver nitrate, or sulphate-of-copper crystal, the preference usually depending upon the presence or absence of secretion.

An infusion of jequirity (one bean to six or eight drachms of water, infused for twenty-four hours) has of late been much recommended in the treatment of all forms of granulated lids; but, having had a slight experience with this remedy, as well as having observed its action in cases occurring in the practice of others, I am not prepared to look upon it with favor. An intense and painful inflammation, diphtheritic in appearance, develops as a result of an application of this infusion, which persists for from ten days to two weeks, and oftentimes threatens total destruction of the eye. The adoption of this procedure is warranted only in inveterate cases where all other remedies have failed, or where vision is seriously impaired by well marked pannus. In the latter class of cases the treatment will sometimes produce a notable clearing of the cornea and favorable change in the condition of the cicatrices and granulations of the lid.

A point not to be forgotten is, that the disease is an infectious one, and that therefore attention to proper hygienic regulations must not be omitted.—Not only local but general cleanliness is of utmost importance. As a local antiseptic and cleansing solution for the eye, nothing excels the bichloride solution (1 to 6000 or 8000), and the patient should be instructed to use this thoroughly and often. As a general application, nothing is better than the free use of soap and water, which in many instances must be prescribed by the physician, the appearance of the patient indicating but a slight acquaintance with such a valuable remedy.

Granular conjunctivitis or trachoma must at all times be considered a grave disorder, and the success attained in its treatment will to a large extent depend not only upon thoroughness, but upon the intelligent selection of procedures or remedies. Surgical measures, as pointed out, are not applicable to all types and forms, but they are applicable to the larger portion of those cases which ordinarily threaten to result disastrously to the vision, and which if treated by the older method would not only tax the patience of both physician and patient, but possibly result in ill success, even though receiving the most careful and thorough management.

Fort Wayne, Indiana.

NASA FEVER OF INDIA.

BY N. C. MITRA, M.A., M.B.

Násá is the Sanskrit word for nose. *Násá fever* is a malady somewhat common to India, and especially to Bengal, that is due to a peculiar affection of the nasal mucous membrane. Strange to say, it appears to have attracted no attention in England or America, as it has never been described in any text-book of these countries—probably because it does not exist in either.

Opinions are divided as to the real pathology of the affection. So far as has been worked out, it seems to be a "form of brain fever," with local exhibition in the way of congestion or turgescence of the blood-vessels of the Schneiderian membrane. The swelling, however, is not of an inflammatory nature, as some suppose; is not in the least painful, though it fluctuates on pressure, and is red in appearance. The patient is, as a rule, quite unaware of the presence of swelling, and coincidently therewith, almost, appears the febrile disturbance, which assumes, usually, a remittent type, though sometimes it is intermittent. The temperature in the evening rarely rises above 102°, and may be normal or only a trifle above by morning. The accessory symptoms are very troublesome, and it is for the relief of these that the sufferer usually resorts to a medical man. There is excessive frontal headache, and a sensation of heaviness all over the head; dull pain all along the spinal column, shoulders, and the back of the neck: but the strangest fact is the absence of any uneasy sensation at the site of the swelling, and this strikes one as all the more peculiar because

of the naturally sensitive character of nasal mucous membrane.

The cause of this malady remains quite unexplained; it has not yet been definitely worked out whether the fever and the swelling appear simultaneously, whether the swelling precedes the fever, as is the rule with all inflammatory pyrexias, or whether the fever appears first, as is the case in eruptive maladies; nor has it been determined when the swelling makes its appearance, since no reliable symptoms are present in the beginning. The attack is generally ushered in, however, by a preliminary period of *malaise*. The bowels are costive, the tongue coated, and appetite dull. After a few days the fever subsides, the temperature rising only to 99° in the evening, yet the troublesome accessories remain and are as annoying as ever. There is no definite duration to the fever, though generally a high temperature persists for from three to five days. The swelling never suppurates.

As the patient does not complain of any uneasy sensation at the site of the swelling, it is very difficult sometimes for the physician to arrive at an accurate diagnosis, though the lingering pains in the head and back without the complication of any organic disease are usually sufficient landmarks. Old sufferers, with the first premonition or warning, resort to their medical advisor to have their noses examined, and practitioners who are not familiar with násá often mistake the character of the nasal symptoms.

But once the case is definitely diagnosed by one familiar with the malady, there is a practical end to the trouble. The prognosis is always favorable, though sometimes the temperature rises, fever becomes high, and delirium supervenes, followed possibly by coma and, very rarely, death.

Internal treatment is of little or no avail,—antiperiodics have not the slightest effect on the course of the fever. For the relief of pain, bromide, chloral, cannabis Indica and caffeine answer best; tartar emetic has been lauded by many as quickly alleviating the troubles, and a mild purgative at the beginning is useful.

Local treatment consists in puncturing the mucous membrane at the site of the swelling, thereby securing free hæmorrhage, which invariably is of blackish-red hue, and trickles down like some thick substance. Now the patient experiences speedy relief; pain rapidly diminishes, the fever goes off in a day or two, and the sufferer is free from any complaint whatever. I make the puncture with a fine trocar; some use the lancet; but whatever instrument is employed, the puncture should be freely made, ensuring abundant bleeding; otherwise the opening closes up, requiring to to be reopened a day or two later. Unfortunately, most of the sufferers object to the puncture, fearing they will ever after be obliged to subject themselves to like treatment whenever troubled with násá; they prefer the application of silver nitrate—the solid lunar caustic,—or the milky juice of the plant known as kemda or mudar (*Calotropis gigantea*). The swelling, if left to itself, may be absorbed, but a long time is required for such a process to be completed, and in the meantime the patient has to put up with all the attendant troubles, and it is to obviate these that the juice of the mudar is applied. Some recommend an application of a two-percent. solution of cocaine, declaring the swelling disappears on repeated application; and while such may prove effective in an individual case, as a rule it is of little or no benefit; cold affusion, and friction, give better results in most instances.

As one attack predisposes to another, native physicians recommend thorough rubbing of the affected mucous membrane with mustard oil to guard against future attacks; and I have one patient who appears every six months to have his Schneiderian membrane punctured. Násá may recur every month, bi-monthly, every six months, or yearly, and some are so sensitive to its influence as to require constant attention in order to ward off attacks.

Ranchi, Bengal.

OUTLINES OF SANITARY ORGANIZATION OF SOME OF THE GREAT ARMIES OF THE WORLD.

BY MAJOR JOHN VAN RENSSELAER HOFF, SURGEON U. S. ARMY.

(*Continued from page 714.*)

The establishment of a uniform system of ambulance corps in the armies of the United

States was not accomplished until the spring of 1864, when Congress passed the following Act, which was approved by the President on March 1st, 1864, and promulgated by the Secretary of War in General Orders No. 106, War Department, A.-G.O., Washington, D.C., March 16th, 1864:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That the medical director or chief medical officer of each army corps shall, under the control of the medical director of the army to which such army corps belongs, have the direction and supervision of all ambulances, medicine and other wagons, horses, mules, harness, and other fixtures appertaining thereto, and of all officers and men who may be detailed or employed to assist him in the management thereof, in the army in which he may be serving.*

Sec. 2. And be it further enacted: That the commanding officer of each army corps shall detail officers and enlisted men for service in the ambulance corps of such army corps, upon the following basis, viz.: One captain, who shall be commandant of said ambulance corps; one first lieutenant for each division in such army corps; one second lieutenant for each brigade in such army corps; one sergeant for each regiment in such army corps; three privates for each ambulance, and one private for each wagon; and the officers and non-commissioned officers of the ambulance corps shall be mounted: Provided, That the officers, non-commissioned officers, and privates so detailed for each army corps shall be examined by a board of medical officers of such army corps as to their fitness for such duty; and that such as are found to be not qualified shall be rejected, and others detailed in their stead.

Sec. 3. And be it further enacted: That there shall be allowed and furnished to each army corps two-horse ambulances upon the following basis, to wit: Three to each regiment of infantry of five hundred men or more; two to each regiment of more than two hundred and less than five hundred men; and one to each regiment of infantry of less than two hundred men; two to each regiment of cavalry of five hundred men or more; and one to each regiment of cavalry of less than five hundred men; one to each battery of artillery—to which battery of artillery it shall be permanently attached; to the headquarters of each army corps two such ambulances; and to each division train of ambulances two army wagons; and ambulances shall be allowed and furnished to division brigades and commands not attached to any army corps upon the same basis, and each ambulance shall be provided with such number of stretchers and other appliances as shall be prescribed by the Surgeon-General. Provided, That the ambulances and wagons herein mentioned shall be furnished, as far as practicable, from the ambulances and wagons now in the service.

Sec 4. And be it further enacted: That horse- and mule-litters may be adopted or authorized by the Secretary of War, in lieu of ambulances, when judged necessary, under such rules and regulations as may be prescribed by the medical director of each army corps.

Sec. 5. And be it further enacted: That the captain shall be the commander of all the ambulances, medicine and other wagons in the corps, under the immediate direction of the medical director or chief medical officer of the army corps to which the ambulance corps belongs. He shall pay special attention to the condition of the ambulances, wagons, horses, mules, harness and other fixtures appertaining thereto, and see that they are at all times in readiness for service; that the officers and men of the ambulance corps are properly instructed in their duties, and that their duties are performed, and that the regulations which may be prescribed by the Secretary of War, or the Surgeon-General, for the government of the ambulance corps, are strictly observed by those under his command. It shall be his duty to institute a drill in his corps, instructing his men in the most easy and expeditious manner of moving the sick and wounded, and to require in all cases that the sick and wounded shall be treated with gentleness and care, and that the ambulances and wagons are at all times provided with attendants, drivers, horses, mules, and whatever may be necessary for their efficiency; and it shall be his duty also to see that the ambulances are not used for any other purpose than that for which they are designed and ordered. It shall be the duty of the medical director or chief medical officer of the army corps, previous to a march, and previous to and in time of action, or whenever it may be necessary to use the ambulances, to issue the proper orders to the captain for the distribution and management of the same, for collecting the sick and wounded and conveying them to their destination. And it shall be the duty of the captain faithfully and diligently to execute such orders. And the officers of the ambulance corps, including the medical director, shall make such reports, from time to time, as may be required by the Secretary of War, the Surgeon-General, the medical director of the army or the commanding officer of the army corps in which they may be serving; and all reports to higher authority than the commanding officer of the army corps shall be transmitted through the medical director of the army to which such army corps belongs.

Sec. 6. And be it further enacted: That the first lieutenant assigned to the ambulance corps for a division shall have complete control, under the captain of his corps and the medical director of the army corps, of all the ambulances, medicine and other wagons, horses, mules, and men in that portion of the ambulance corps. He shall be the actting assistant-quartermaster for that portion of the ambulance corps, and will receipt for and be responsible for all the property belonging to it, and be held responsible for any deficiency in anything appertaining thereto. He shall have a traveling cavalry forge, a blacksmith, and a saddler, who shall be under his orders, to enable him to keep his train in order. He shall have authority to draw supplies from the depot quartermaster, upon requisition approved by the captain of his corps, the medical director, and the commander of the army corps to which he is attached. It shall be his duty to exercise a constant supervision over his train in every particular, and keep it at all times ready for service.

Sec. 7. And be it further enacted: That the sec-

*The number of men detailed by this law seems barely sufficient to perform the work of ambulance and dressing station orderlies. The only inference is that during the war of 1861-65 the bearer work was done by fatigue details from the line of the Army.

ond lieutenant shall have command of the portion of the ambulance corps for a brigade, and shall be under the immediate orders of the first lieutenant, and he shall exercise a careful supervision over the sergeants and privates assigned to the portion of the ambulance corps for his brigade; and it shall be the duty of the sergeants to conduct drills and inspections of the ambulances, under his orders, of their respective regiments.

Sec. 8. And be it further enacted. That the ambulances in the armies of the United States shall be used only for the transportation of the sick and wounded, and, in urgent cases only, for medical supplies, and all persons shall be prohibited from using them, or requiring them to be used, for any other purpose. It shall be the duty of the officers of the ambulance corps to report to the commander of the army corps any violation of the provisions of this section, or any attempt to violate the same. And any officer who shall use an ambulance, or require it to be used, for any other purpose than as provided in this section, shall, for the first offense, be publicly reprimanded by the commander of the army corps in which he may be serving, and for the second offense shall be dismissed from the service.

Sec. 9. And be it further enacted: That no person except the proper medical officers, or the officers, non-commissioned officers, and privates of the ambulance corps, or such persons as may be specially assigned, by competent military authority, to duty with the ambulance corps for the occasion, shall be permitted to take or accompany any sick or wounded men to the rear, either on the march or upon the field of battle.

Sec. 10. And be it further enacted: That the officers, non-commissioned officers, and privates of the ambulance corps shall be designated by such uniform or in such manner as the Secretary of War shall deem proper: Provided, That officers and men may be relieved from service in said corps, and others detailed to the same, subject to the examination provided in the second section of this Act, in the discretion of the commanders of the armies in which they may be serving.

Sec. 11. And be it further enacted: That it shall be the duty of the commander of the army corps to transmit to the Adjutant General the names and rank of all officers and enlisted men detailed for service in the ambulance corps of such army corps, stating the organizations from which they may have been so detailed; and, if such officers and men belong to volunteer organizations, the Adjutant-General shall thereupon notify the governors of the several States in which such organizations were raised of their detail for such service; and it shall be the duty of the commander of the army corps to report to the Adjutant-General from time to time the conduct and behavior of the officers and enlisted men of the ambulance corps, and the Adjutant-General shall forward copies of such reports, so far as they relate to officers and enlisted men of volunteer organizations, to the governors of the States in which such organizations were raised.

Sec. 12. And be it further enacted: That nothing in this Act shall be construed to diminish or impair the rightful authority of commanders of armies, army corps, or separate detachments, over the medical and other officers and the non-commissioned officers and privates of their respective commands.

Approved March 11th, 1864.

By the passage of this Act the authority of the Medical Department over the ambulance corps was fully established. How effectually, and at the same time how considerately, the medical officers availed themselves of the power thus conferred upon them, is strikingly shown in the systematic manner with which the immense number of wounded after the battles of the Wilderness, Spottsylvania Court House, Cold Harbor, Petersburg, and of the campaigns in Georgia and the Carolinas, were cared for on the battle-field, were removed to field and base hospitals, and were finally distributed in general hospitals throughout all parts of the United States. Notwithstanding the opinion of General H. W. Halleck, no panics or stampedes were reported as having been caused by the presence of the non-combatants of the ambulance corps.

Major Heizmann, Medical Department U. S. A., in his admirable paper on "Military Sanitation in the Sixteenth, Seventeenth and Eighteenth Centuries," writes:

The persistence of regimental hospitals in England and America to the beginning of the present century is a relic of the company methods of the sixteenth century.

England learned in the Crimean War the utter inadequacy of such sanitary organizations; but it was not until the War of Secession, in the face of a threatened break-down, and literally under fire, that we abandoned a method which for a hundred years had in other armies been relegated to history. Major Winne, Medical Department U. S. A., writes:*

Our sick and wounded in Mexico had no special provision made for them. The regulation temporary details for field service were taken from the line. . . . The outbreak of the Civil War found us absolutely without organization of any kind for taking prompt care of large numbers of wounded. None but those who served in the field then can realize the chaos which existed.

What was finally accomplished, and at what cost, is a part of the history of that terrific struggle. Our author concludes:

The greater number of medical officers who distinguished themselves in our war, by carrying the operations of their department to a height of usefulness and perfection never before known, and which won the un-

* *Journal of the Military Service Institute*, No. 52.

qualified admiration of Europe, have passed away. It is needless to recapitulate their names. Their monument is perpetuated in the medical and surgical history of the war. "Monumentum ære perennius," and as, in the noble words of Lord Bacon, "they attained worthy ends and expectations," their memories are cherished in the hearts of their surviving comrades.

With the close of the war, so rich in dearly bought experience, the Medical Department, apparently content to embalm that experience between the covers of its great history, returned to the methods of anti-bellum days, and the Army again became the advance guard of civilization upon our western frontier.

A generation of medical officers has grown up who know not war, and whose experience, gained at best in Indian outbreaks and expeditions, but ill fits them to meet the exigencies of that for which alone they exist. The art of war in its destructive phases is for the line officer. The art of military sanitation—the most special and yet most comprehensive of all the specialties of our profession—is for the medical officer.

The history of the Medical Department since 1865 may be outlined as follows:

On July 28th, 1866, the following Act of Congress became law:

> The Medical Department of the Army shall consist of one surgeon-general, with the rank of brigadier-general; one assistant surgeon-general, with the rank of colonel of cavalry; one chief medical purveyor, and four assistant medical purveyors, with the rank of lieutenant-colonel of cavalry; sixty surgeons, with the rank of major of calvary; one hundred and fifty assistant-surgeons, with the rank of lieutenant of cavalry for the first three years of service, and the rank of captain of cavalry after three years' service. . . .

On March 3d, 1869, all promotion or appointment in the Medical Department (and other staff corps) was suspended, and thereafter till 1874 the Department simply marked time. Never since its reorganization had all its offices been filled; and in 1874, when examinations for appointment were reinstituted, there were nearly sixty vacancies.

By Act of Congress approved June 23d, 1874, the Medical Department of the Army thereafter consisted of one surgeon-general with the rank, pay and emoluments of a brigadier-general; one assistant surgeon-general and one chief medical purveyor, each with the rank, pay and emoluments of a colonel; and two assistant medical purveyors, with the rank, pay and emoluments of lieutenant-colonels; fifty surgeons, with the rank, pay and emoluments of majors; one hundred and fifty assistant-surgeons, with the rank, pay and emoluments of lieutenants of cavalry for the first five years' service, and with the rank, pay and emoluments of captains of cavalry after five years' service. And all original vacancies in the grade of assistant-surgeon were to be filled by selection by competitive examination; and the Secretary of War was authorized to appoint, from the enlisted men of the Army, or cause to be enlisted, as many hospital stewards as the service might require, to be permanently attached to the Medical Department, under such regulations as he might prescribe.

The permanent attachment of hospital stewards to the Medical Department, reiterated in this law, was the germ of an organization which thereafter sprang into existence, and which is destined to radically change the methods that have for so many years obtained in our service—methods which were only temporarily changed to meet the exigences of the most stupendous war the world has seen.

The Act of June 26th, 1876, declared that the number of assistant-surgeons allowed by law should be reduced to one hundred and twenty-five; in addition to the grades then allowed by law, there should be four surgeons with the rank, pay and emoluments of colonels, and eight surgeons with the rank, pay and emoluments of lieutenant-colonels, to be promoted by seniority from the medical officers of the Army.

No further legislation affecting the Medical Department became law until March 1st, 1887, when the following Act was passed:

> Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled: That the hospital corps of the United States Army shall consist of hospital stewards, acting hospital stewards, and privates; and all necessary hospital services in garrison, camp, or field (including ambulance service) shall be performed by the members thereof, who shall be regularly enlisted in the military service; said corps shall be permanently attached to the Medical Department, and shall not be included in the effective strength of the Army, nor counted as part of the enlisted force provided by law.

That the Secretary of War is empowered to appoint as many hospital stewards as, in his judgment, the service may require, but not more than one hospital steward shall be stationed at any post or place without special authority of the Secretary of War.

That the pay of hospital stewards shall be forty-five dollars per month, with the increase on account of length of service as is now or may hereafter be allowed by law to other enlisted men. They shall have rank with ordnance sergeants and be entitled to all the allowances appertaining to that grade.

That no person shall be appointed a hospital steward unless he shall have passed a satisfactory examination before a board of one or more medical officers as to his qualifications for the position, and demonstrated his fitness therefor by service of not less than twelve months as acting hospital steward. And no person shall be designated for such examination except by written authority of the Surgeon-General.

That the Secretary of War is empowered to enlist, or cause to be enlisted, as many privates of the hospital corps as the service may require; and to limit or fix the number, and make such regulations for their government as may be necessary; and any enlisted man in the Army shall be eligible for transfer to the hospital corps as a private. They shall perform duty as wardmasters, corps nurses, and attendants in hospitals, and as stretcher-bearers, litter-bearers, and ambulance attendants in the field, and such other duties as may by proper authority be required of them.

That the pay of privates of the hospital corps shall be thirteen [since increased to eighteen] dollars per month, with the increase on account of length of service as is now or may hereafter be allowed by law to other enlisted men; they shall be entitled to the same allowances as a corporal of the arm of service with which they are on duty.

That privates of the hospital corps may be detailed as acting hospital stewards by the Secretary of War, upon the recommendation of the Surgeon-General, whenever the necessities of the service require it; and when so detached their pay shall be twenty-five dollars per month, with increase as above stated. Acting hospital stewards, when educated in the duties of the position, may be eligible for examination for appointment as hospital steward, as above provided.

Loosely drawn and elastic as is this law, no Act of Congress since that of 1847—which for the first time recognized the military status of the medical officer—is more important to the present efficiency and future usefulness of the Medical Department. All the regulations governing this organization are of necessity based upon this law, and very well meet the current requirements of the various detachments scattered throughout the country; but such active-service experience as has been gained therewith has shown that a more closely knit military organization is necessary. This is directly in line with the experience of military medical officers in other armies. And there can be no question that a very much more detailed organization than now exists in the hospital corps will be necessary when we find ourselves, as we soon surely will, in the midst of a war. Let us hope that we will not again have to organize under fire.

To obviate the defective organization above set forth, a bill was introduced in Congress in December, 1892, as follows:

That the companies of the hospital corps organized by the Secretary of War in the Medical Department of the Army are hereby established upon the same military status as companies of infantry, and shall hereafter be known as Companies of the Hospital Corps.

That each company shall consist of eight hospital sergeants—one of whom shall be selected as first sergeant, and one as quartermaster sergeant,—six hospital corporals, two musicians, one artificer, and as many privates, not exceeding one hundred, as the President may direct.

That the hospital sergeants shall be detailed as such from the hospital stewards, the hospital corporals from the acting hospital stewards, and the remaining members of the companies from the privates of the hospital corps U. S. Army, and each shall receive only the pay of his grade in the hospital corps.

That the nesessary officers to command the companies of the hospital corps shall be detailed from the Medical Department of the U. S. Army.

That the President is authorized to organize for bearer, ambulance, field-hospital, and other like service, such companies of the hospital corps as he may deem necessary.

That all Acts or parts of Acts inconsistent with the provisions of this Act are hereby repealed.

This bill passed both Houses substantially as introduced, but in the last hours of the session failed of the President's signature.

The Company of Instruction* organized by the compiler, at Fort Riley, Kansas, under authority of the Secretary of War, as a training school for men of the hospital corps, still exists and is doing good work; but its organization is of necessity only of the most temporary and tentative character. That it has proved its right to exist is shown by the testimony of all who are familiar with its excellent results.

The following Act of Congress was approved July 27th, 1892:

That, from and after the passage of this Act, the grade of certain medical officers of the Army below that of surgeon-general shall be as follows: Those holding the rank of colonel, assistant surgeon-generals; those holding the rank of lieutenant-colonel, deputy surgeon-generals.

---

*This company was organized in the autumn of 1891, and was without precedent in our service. A second company was organized at Fort D. A. Russell, Wyo., in 1892, which was subsequently transferred to Washington Barracks, D. C.

That before receiving the rank of captain of cavalry, assistant-surgeons shall be examined under the provisions of an Act approved October 1st, 1892. . . .

That medical officers of the Army may be assigned by the Secretary of War to such duties as the interests of the service may demand.

That all Acts or parts of Acts inconsistent with the provisions of this Act are hereby repealed.

The third section of this Act abrogates Section 1169 of the Revised Statutes, viz.: "Officers of the Medical Department of the Army shall not be entitled, in virtue of their rank, to command in the line of the Army or in other staff corps;" and places the Medical Department in the same category with that of the staff corps, as set forth in paragraph 16, Army Regulations, 1889.

From the foregoing it will be observed that there exists to-day in the Medical Department of the United States Army no detailed scheme of organization for active service.* The war scheme promulgated by the law of 1864, which ceased to actively exist with the surrender of the Confederate forces, was abrogated by the peace scheme of 1887, which provides that "all necessary hospital services in garrison, camp or field (including ambulance service), shall be performed by the members of the Hospital Corps." Contrasted with the almost perfect sanitary organization of other armies, our own unpreparedness in this direction points a moral we can ill afford to ignore.

The argument usually advanced † in opposition to a reorganization is the fact that existing arrangements as respects subdivision of staff duties accords with the staff organization of the war period.

This objection to change may be disposed of by the statement that the efficient armies of the world have little resemblance, as respects organization, to those maintained thirty years ago. Arms, equipments, systems of evolution, and method of supply have all been radically changed so as to make them conform to the new conditions of armament and the requirements of modern times. The general tendency is the concentration of chief authority, and an organization in each branch so close, thorough, and complete that coöperation can be had from each subordinate.

Governor's Island, N. Y., April, 1895.

* The paragraphs (1590 to 1602) of Army Regulations, 1889, under the caption "Hospital and Ambulance Service in War," give a general outline of sanitary organization; this outline embraces simply the principles of battle-field assistance, and utterly fails to enter into the details of organization so essential to successful work. Hence it may be justly said that in the Medical Department of the United States Army there exists to-day no detailed scheme of organization for active service.

† Report of the Secretary of War, 1895.

CORPULENCE AND ARTERIO-SCLEROSIS.

BY DOCTOR E. HEINRICH KISCH.

One of the most frequent and serious collateral symptoms of advanced general lipomatosis is arterio-sclerosis, with special reference to that of premature character. In corpulent people the modification of the vessels, characterized by reduced elasticity of the vascular walls and depressed contractility of their smooth muscular fibres, occurs far more frequently and at a much earlier period of life than in others. The primary cause of this frequent coincidence of arterio sclerosis and lipomatosis universalis is the plethoric form of corpulence arising from immoderate indulgence in food and drink in connection with insufficient bodily exercise. Gradually and steadily arterial pressure is augmented, inducing permanent distortion and expansion of the arterial vessels and mechanical irritation of their walls. The high-liver and gourmand, in similar fashion, promotes the multiplication of the fat-masses and the sclerotic modification of the vessels. But arterio-sclerosis cannot be regarded solely as a collateral symptom of general lipomatosis, since it is also a sequel. Anatomical researches justify the assumption that by multiplication of the fat-cells in, and in close proximity to, the adventitious tissue of the arteries, a direct influence is exerted on the latter whereby arise sclerotic changes; furthermore, the clinical fact that the augmented accumulation of fat in the lower abdomen, in the mesentery, in the greater omentum, in the adipose capsule of the kidneys, etc., forms an impediment to the free movement of the blood in the intestinal vessels—an impediment which subsequently leads to increased engorgement in the entire arterio vascular system—explains the genesis of arterio-sclerosis in the corpulent. A further ætiological

factor is the fact that many corpulent people are addicted to spirits, and in such cases the well known influence of the alcohol must be included.

In the plethoric form of corpulence another collateral disease exerts a promotive influence, viz, arthritis; nor should syphilis be ignored in this connection.

When arterio-sclerosis and corpulence are coincident, the former imparts a peculiarity to the symptoms which are caused by the excessive accumulation of fat in the body, especially about the heart and within the cardiac muscle. This peculiarity finds its first expression in the behavior of the visible and palpable arteries, characteristic of arterio-sclerosis—the peripheral are thread-like or serpentine, the palpable abnormally hard to the touch — as well as in the sphygmographic tableau of arteria radialis, and then manifests itself in the heart symptoms.

In the numerous sphygmographic tracings taken from very corpulent individuals, I have been struck with the frequency with which the tracings of pulse-curves exhibit the first signs of increased vascular tension and suggest the presence of arterio-sclerosis; these are curves which reveal a steep and rapidly rising line of ascension, the first elevations of elasticity being far more pronounced than normally and shooting upward materially higher toward the apex of the curve. Of 700 corpulent people, from whom were made accurate sphygmic curves, I found in 110 (16.1 per cent.) a pulse that revealed increase of vascular tension through arterio-sclerosis.

In very advanced arterio-sclerosis of the corpulent the pulse-tableau of the disease is, in rare instances, characterized by tardiness: with a low line of ascension, the summit of the curve is flat, smooth, yes even round and semicircular; the elevation of the backward beat being scarcely indicated, and the elevations of elasticity in the descending line being lessened or absent. At times a material retardation of the pulse is joined therewith.

The heart of the corpulent—the food-fattening heart, as I have termed it—is one whose function seems to be interfered with by the increase of bodily weight and growth of fatty tissue, and on whose working capacity new demands are made by the new vascular regions which arise from the formation of new fat. This heart encounters in arterio-sclerosis a new, material impediment which opposes its propelling power. The increased labor of the heart is manifested by shortness of breath and distress following any considerable muscular effort, protracted walking, mounting of stairs, etc. Objectively, we have symptoms of hypertrophy of the left ventricle—in consequence of augmented resistance offered its evacuation into the aortal system; abnormal resistance of the apex-thrust; strengthening of the second tone over the aorta, at times a ringing character being perceptible therein. Sclerosis of the arteries also promotes the development of cardiac asthma and of attacks of angina pectoris in the corpulent, although it can by no means be regarded as the sole cause of these ominous symptoms.

Coincident arterio-sclerosis in the corpulent is, however, undoubtedly dangerous to life, in that it frequently gives rise to encephalorrhagias. In the arterial augmentation of blood-pressure and in the rigidity of the small arteries lies the cause of the fact that hæmorrhage of the brain hangs, like the sword of Damocles, over the heads of even such corpulent subjects as show very slight cardiac symptoms and apparently feel well. It falls very suddenly and unexpectedly when there occurs any casual augmentation of the already high arterial tension or elevation of the venous blood-pressure and thereby, indirectly, of the arterial. Psychic excitement, excesses with wine or women, great muscular effort, or, on the other hand, straining at stool, violent sneezing, crying or laughing, all are the immediate source of brain hæmorrhage in the corpulent, and to this extent arterio-sclerosis is the cause of sudden death.

A deleterious influence is exerted by arterio-sclerotic modification, when a collateral symptom of corpulence, on the kidneys, which, in lipomatous individuals, frequently do not need this factor to place them in a condition of passive hyperæmic congestion. Then follow inflammatory infiltrations with the familiar sequel-symptoms, proceeding to complete atrophy of the kidney. These renal symptoms are exhibited most frequently and strikingly in the drinking corpulent. Corpu-

lent alcohol-users often, therefore, succumb with symptoms of granular atrophy of the kidneys.

It is therefore important for the physician, in examining corpulent patients, always to attend closely to the collateral symptom of arterio-sclerosis. The latter will be encountered with surprising frequency. The autopsy has also established the frequent coincidence of arterio-sclerosis and lipomatosis universalis. Among eighteen cases, in which lipomatosis universalis with its sequelæ was necessarily considered the cause of death (the autopsies are described in detail in my monograph on Corpulence), arterio-sclerosis was present in thirteen cases—more than two-thirds—and in comparatively younger individuals, aged respectively 29, 41, 47, and 48 years.

Vienna, Austria.

A METAPHYSICAL STUDY.

BY W. A. T.

As down the avenue I took my way
Afoot—my wheel kyphosis had that day—
I met a weary man, a man of care,
With shambling feet and *fin-de-siècle* air,
A carpenter who'd covered leagues of ground
In searching for the job he never found.
"Good morning, sir," quoth I, "thy looks suggest
The funeral march of Saul and all the rest
Of Israel. What has happened to destroy
The April aspect of thy spirit's joy?"
O 'twas a touching sight that pleasant morn
To see the tears course down his nose forlorn,
As, straightening up his manly six-feet-one,
He said: "Heardst thou not what the fire hath done?
Yestreen its flames made all the heavens red
And turned six hundred families out of bed."
"Too bad!" I said,—"but there's a job for you."—
I looked, and he had vanished from my view.
"Surely," said I, "my carpenter's gone back
To Mars, Altruria, or—Pontiac."

I strayed into a cobbler's shop to see
What Art could do to mend a sole for me,
And as I hung my hat upon the floor
The shoe repairer heaved a sigh most sore
And let a great round tear fall down and stain
The apron that he wore. "It looks like rain,"
I ventured. But he answered not a word.
I saw his feelings were most strangely stirred.
He rallied. "Ah, mein frendt, haf you not heard,"
He said, "of what dose school insbectors done?
Dey puy sdone-grafel und pile tvendy ton
Or less all ofer vere der shildren blay—
Now vas that not a purty time off day?
Dose leedle shildrens make so many holes
Deir shoes in, also vear oudt all deir soles,
Pecause some beeples like to make an ass of
Demselves, und paint von sign: 'Blease keep der Grass Off.'"
"That may be very true," I said, "but still
The injured shoes are money in your till—
Is it not so?" He *shivered* thereupon,
And said: "Your shoes to-morrow vill be done."

So odd this sympathy appeared, I said,
Sub rosa: "Am I in or out of bed?
Do people of this character exist,
Or am I, maybe, a somnambulist?"
I pinched myself. It really hurt. I was
Awake; and while my brain was in a buzz
I called to see my doctor and to pay
A bill that had been due since early May—
'Twas now July, and I had money to burn,
Being a poet.

Said the M.D.: "I learn
That fifteen sewers are to be repaired
This summer. By the time the last is aired,
There will be seventy cases of typhoid
And eighty of diphtheria. I'm employed
To write a screed for Saturday's *Free Press*
Reciting man's contagious illnesses
And how to head them off. But what am I,
What is the Medical Society,
What are Professor Vaughan and Doc McLeod,
The Pingree or the anti-Pingree crowd,
Statistics, logic, pamphlets by the acre,
Or even our own distinguished Doctor Baker,
When on the other hand are sewers laid bare,
Their deadly microbes reeking to the air
In haste to fatten on the children's throats
And ravage the November crop of votes?
What fools the balance of the people be!
We give them counsel, but because it's free
They laugh at us, the laws of health neglect,
And then get sick—what else could you expect?
O *then* they call us; everything we say
Is gospel to them then—they have to pay
For it. Well, that is grist for our mill:
They disobey us, and they get their fill
Of independence. Then we must prescribe
For money. While they perish, we survive.
But we are born philanthropists: we long
To see the babies fat, the mothers strong,
Brothers and sisters dodge the dangerous stage,
And all hands living to a ripe old age.
Awake when others are asleep—or blinking—
We burn the midnight oil in arduous thinking,
As if were all men well 'twere none the worse for us—
Concocting plans to make ourselves superfluous."

That was a corker. But I sadly mused,
While handing out the coin (which he refused
Not): This is only *one* of the doctor men;
He wouldn't give a dope for colic when
A fellow has gastritis, nor declare

His clammy-footed patient must not dare
To rise from bed, even to shut the door,
Until he's taken twelve prescriptions more;
He wouldn't practice on a hopeless case
And charge the widow for it, nor disgrace
His high profession by prescribing what
He doesn't know a blessed thing about—
Some nostrum for a case he understands
The same as I do Sanscrit.—But, "my lands,"
As mother says, if folks should do as he
Advises, what 'd become of his family?

PARALYSIS.*

BY D. O'DONOVAN, M.D.

Paralysis admits of five subdivisions, viz.: Cerebral, Spinal, Reflex, Hysterical, and Toxæmic; and it is to the latter that I particularly desire to call attention. Instead of attempting to give a detailed history of paralysis, I prefer to relate a few cases that have come under personal observation.

First I will mention two somewhat peculiar cases—one that of a boy, fourteen years of age, who fell from a lumber-pile, striking upon the shoulders and the back of the head, with the result of complete paralysis of the body and lower extremities, from which after long treatment partial recovery resulted—he is able to hobble about with the aid of a cane; the other a young man of powerful physique, who, in attempting to prevent a saw-log from rolling off a truck, was thrown to the ground with his head forced between his thighs, the log passing over him. That he was not instantly killed was due to the fact that a stump or root afforded some protection; his back was broken about the region of the lower rib, and good union was had, yet complete paralysis of the lower extremities resulted, and under the circumstances death would have been preferable both to himself and friends.

After fourteen years' experience in the profession I flattered myself that nothing relative to paralysis had escaped my observation, but to my surprise I recently discovered a genuine case of palsy resultant upon a simple case of measles. I was called to see a child, ten years of age, in April, 1893, who exhibited the typical evidences of measles. A second visit only was required, at which time the mother remarked she had escaped the disease in childhood, and considered herself now too old to contract it, though I told her age could not be depended upon as a safeguard.

Ten days later I was again summoned, this time to find the mother suffering from an unmistakable attack of the same malady, contracted from the child. Here again the usual remedies were administered. I cautioned regarding draughts, and promised to call the succeeding day. On the second visit to the mother I found the upper part of the body well covered with rash, but no untoward symptom, hence did not deem it necessary to call again unless especially requested. A week later I was again summoned. Found patient still had traces of rash remaining; was able to get about the house, but only by the aid of chairs, table, or other piece of furniture; complained of a feeling of weakness; and as I supposed she was merely suffering from debility as a sequel to the malady, I prescribed nothing but elixir of iron, quinine, and strychnine.

A day later found my patient in bed again, and the sense of weakness perceptibly increased; she was unable to clasp my hand with either of hers with any noticeable effect. I now suspected paralysis, and asked her to draw up her knees, which she was able to do with apparently little or no effort.

The third day I found the patient to all appearances growing weaker, and unable to draw up her knees without manifest difficulty. The paralysis of the arms was also increased. I was giving quinine, nux vomica, and capsicum.

Two days later my patient was still weaker; the legs could no longer be drawn up unaided, and the hands could scarcely be extended.

With another twenty-four hours the difficulty had still increased. At my seventh visit the hands were useless, the muscles of deglutition affected, motion of lower extremities confined to ankles.

On the eighth visit little change was noted, except that swallowing had become even more difficult; patient lay in a helpless condition, and liquid food was required; she was unable to drink, as the second swallow would be returned through the nose.

*Read before the Wayne County Medical Society.

During the three succeeding days her condition was much the same, when counsel was summoned. My *confrère* made a thorough examination of the premises, thinking sanitary conditions might have something to do with the case, but no evidence of the kind could be elicited, and finally his judgment coincided with my own—that the paralysis was the sequel purely of poisoning of the system from measles. Potassium iodide was now administered, but after a few doses it had to be discontinued for an interval, when it was again resumed.

When the patient seemed largely bereft of the sense of feeling, and her extremities powerless, a new symptom presented itself: every attempt to move the body resulted in extreme pain. For this I ordered liniment, and at the same time required the extremities to be enveloped in warm cotton, which in turn was covered with several thicknesses of flannel; even then, so bitterly did the invalid complain of cold, that it was found necessary to have recourse to water-bags, hot plates, etc. The last trace of fever having now disappeared, I ordered carbonate of iron, extract of nux vomica, extract of cascara, resin of podophyllin, and powdered capsicum. After the feeling of pain had been practically overcome I commenced using electricity, at the same time returning again to the use of potassium iodide. Complete recovery did not take place until the succeeding October.

In the case just described there are three prominent features, viz.: good action of the bladder; extreme pain upon movement; and sense of cold in the lower extremities.

It is interesting to note the efforts of Nature to bring about functional use of the parts affected by paralysis, and it is also wonderful at times to witness the gradual return to normal condition in cases that have been deemed hopeless. And yet, upon the other hand, it not infrequently happens that after varied and long-continued treatment, patients suffering from the ailment just described pass from the care of one physician to another in practically the same condition as when first seen, baffling the best endeavors, and compelling the profession to admit its inability to successfully combat so dreaded a disease.

11 Baker street, Detroit, Michigan.

Correspondence.

Neither Editor nor Publisher will be responsible for opinions expressed in this department of THE MEDICAL AGE.

HORSE NETTLE IN EPILEPSY.

Editor MEDICAL AGE:

Thinking my experience with Horse Nettle in epilepsy may be of some interest, I report same as follows:

About July 15th, 1895, there was brought to me a child, eleven years of age, the son of healthy parents whose family history is good. He had been suffering with epilepsy for three years, the attacks coming on every day and sometimes running up as high as twelve in a day; he had been gradually growing worse in spite of all treatment, the slightest exertion of any kind increasing the attacks and also the severity. The parents did not think there was any use trying to do anything for him. Just about this time my attention was directed to *Solanum carolinense*, and, though I had little hopes of it doing any good, I decided to try it. I began by giving one drachm of Parke, Davis & Co.'s fluid extract four times a day. A few days later the father reported the patient "no better." I then increased the dose to two drachms four times a day. Still there was no apparent improvement, and the patient's mother thought there was no use in attempting to do anything farther. However, I persuaded her to be patient, and again increased the dose, this time to one-half ounce, to be administered thrice daily. Now it was soon observed the "fits" were less frequent and not so severe. Nevertheless I advised increasing the dose to six drachms three times a day, but the only apparent effect was to cause drowsiness. On her own responsibility the mother now gave one ounce three times daily, and speedily the fits almost stopped. She then gave four ounces "once in a while," and since then the child has not had a single fit.

After a time the dose was gradually decreased. Now for more than two months the child has not had even the semblance or premonition of a fit. He potters about the farm without inconvenience to himself, doing light work. The remedy is still being taken —four drachms once a week; but I have ordered complete cessation at the end of a fortnight. Whether the trouble will again return or not remains to be seen, but I feel confident that if it does return a few doses of Horse Nettle will answer.

Yours truly,
H. G. MACKID.

Calgary, N. W. T.

VALUE OF SUNDEW.

Editor MEDICAL AGE:

Some time since I saw an item in your journal regarding the inefficacy of Sundew. Permit me to say that the practitioner who prescribes this remedy for whooping-cough in a patient that exhibits a broad, thick, pasty tongue, sodden features, and sluggish circulation—or any other cough where these conditions exist,—will be disappointed, and of course will at once declare Drosera worthless. But Drosera is the remedy when the cough is sympathetic—when there is an irritable state of the nerve centres—with elongated tongue, pinched features, bright eyes; and it should be administered in drop doses as often as every hour. If there is fever, with sharp pulse, add one half drop doses of aconite. If restless, with flushed face, add one-half drop doses of gelsemium, and all will be happy. If there is labored, constricted pulse, add to the Drosera drop doses of lobelia. *Grindelia robusta* is indicated when there is a broad, pallid, pasty tongue, when the patient moans (instead of the sharp cry that calls for Drosera), pulse lagging and intermittent, expression of features dull; give in one-and-one-half to two-drop doses every hour—assisting with sulphite of soda and salol, together in one capsule, every four hours.

These remedies I have been using for twenty-five years—salol excepted, as it is not twenty-five years old,—and they can be relied upon when given as indicated. When there is fullness of the tissues, I employ fluid extract Apocynum, especially when there is engorgement of spleen, liver, uterus, or serous membranes—and this includes certain forms of dropsy,—giving all that can be borne without moving the bowels too freely. As a heart remedy in the same class of cases in which digitalis, strophanthus, adonis or cactus is indicated, Apocynum in half-drop doses is never disappointing. Remember, far better effects can be obtained from most remedies by small doses frequently repeated than from large ones at longer intervals. Remedies often fail because the manner in which they are prescribed causes them to act intermittently, when a continuous effect is demanded.

T. R. RICE.

Utica, Mo.

AMBLYOPIA FROM CHOCOLATE.

Doctor Casey A. Wood, in the *Medical Record*, reports a case of this character occurring to a gentleman aged fifty-four, and remarks: "This establishes beyond reasonable doubt the claim of Hocken, that chocolate occasionally affects the visual centres."

THE MEDICAL AGE.

A SEMI-MONTHLY REVIEW OF MEDICINE.

—PUBLISHED BY—

GEO. S. DAVIS, Medical Publisher, Box 470.

All communications regarding papers, reports, etc., should be addressed to the Editor of the MEDICAL AGE, P. O. Box 470, Detroit, Mich.

Matters relating to advertising space, etc., to be addressed to the publisher, George S. Davis, Box 470, Detroit, Mich.

The editor cannot engage to return rejected manuscripts or to correspond with the writers thereof, unless such are accompanied by sufficient postage.

DETROIT, MICH., DECEMBER 26th, 1895.

Editorial.

EXPERT MEDICAL TESTIMONY IN NEW YORK.

During the present winter, in the State of New York, a systematic effort will be made to place the matter of expert testimony on a more satisfactory basis, and the Assembly will be asked to render illegal the giving of such testimony after the manner of the past.

During the last five years the better members of the medical and legal professions have viewed with alarm the growing frequency of the introduction of so-called medical expert testimony in murder trials, and more particularly where the defense has set up the claim of insanity. As is well known, the rule has been to summon medical men of all classes, without reference to experience or knowledge, and it is notorious that in many instances the so called experts have been bribed or hired to present opinions favorable to one particular side of the case, the scientifically discoverable facts being reduced to a position of secondary importance.

The new bill, which will be presented during the coming session, claims to have been drawn up by "representative members of the profession," and aims to be very radical. We understand it is intended, if possible, to lodge the sole right to give medical testimony in courts, in a non-partisan Board appointed by the Governor, subject to the approval of the Senate. The province of the members of this Board will be to act as instructors and advisors to the courts; and at the same time it is expected its membership will be sufficiently large to provide for all criminal trials,

the number required to constitute a quorum being small enough to allow sections of the Board to act in various localities at the same time.

The Board is to be empowered to call for any evidence that promises to throw light upon a particular case; and when any section of the Board disagrees, the whole body will be called together for decision. Under no circumstances will any medical man, not a member of the Board, be allowed to testify in any court, except upon questions of simple fact, like any other witness; but such may be summoned to give evidence before the Board.

This is to a certain extent a move in the right direction. It has before been pointed out in THE MEDICAL AGE that the office of Coroner as ordinarily filled should be abolished, and the functions of the office be performed by a salaried medical man—as in Massachusetts,—to be known as a Medical Examiner. There seems to be no good reason why also the individuals who serve as medical examiners in any judicial district should not also supply the place of medical experts and act in a non-partisan way as advisors of the court.

Regarding the bill which is to be presented to the New York Assembly, as now outlined it presents one very weak point. It is gotten up by a class of specialists, inasmuch as it is demanded the Board shall be recruited from "the ranks of expert alienists alone," though the plea is added that these are to be "men having a high ascertained qualification." The qualifications of an expert, however, demand something more than mere ability to pass upon the sanity or insanity of an accused person. Alienists are no more competent to pass upon matters of expert pathology, microscopy, and chemistry, than are other practitioners. Insanity is but one of the many pleas that require the careful attention of the court; further, the majority of so-called experts are men who have made their reputation on the basis of articles contributed to the medical press or to medical societies, and who consequently are likely to err in those points which are most familiar to the general practitioner.

What is required as an aid to the courts, is a Board of gentlemen of broad medical education—men who shall be familiar with chemistry and microscopy as well as psychiatry, and also with the different phases presented by surgical and general medical cases. Of what value would be the evidence of an alienist in determining, for example, whether in a particular case death is to be attributed to cholera morbus or to arsenic? It is certain that the requirements of an expert Board cannot be filled by alienists; and it is to be hoped the bill to be presented before the New York Legislature will be so amended as to require the Board of Experts to be made up of medical men of thorough general education, and not merely of class specialists. Indeed, it is doubtful, if the bill should pass as contemplated, whether it would not defeat the very object for which it is proposed, for it is certain no court can uphold acts which constitute class legislation.

FIGURES THAT DO NOT STARTLE.

A somewhat pretentious paper, emanating from the pen of a Hanoverian physician, appeared in a recent number of the *Deutsche Medicinische Wochenschrift*, lauding a certain German preparation of iron and manganese; the caption is "A Contribution to Iron Therapy and Researches into the Blood (Blutuntersuchung)." It has an appearance of learning, bristles with impressive citations, and last, but not least, presents an array of imposing percentages. From some of the latter the readers of THE MEDICAL AGE can extract a little amusement.

Par exemple: The author declares the chief value of the product is "unquestionably based on its content of the inorganic constituents of the blood, since to introduce these into the economy along with the food is more difficult than to provide access for an augmented ration of albumen." He also cites Biernacki as asserting "anæmia is due to poverty of the blood in inorganic constituents."

But what is this startling array of blood-salts, found in this preparation? To our surprise, it is designated as 0.016 gramme in a single dose—a tablespoonful,—or, in other words, *one-tenth of one per cent.!* Of this amount, seventy-five per cent.—we employ the author's own figures—or 0.012 gramme, is alkaline earth phosphates; twenty per cent.,

or 0.0012 gramme, alkali phosphates; five per cent., or 0.0008 gramme, alkaline chlorides!

When it is realized that this *wonderful* percentage of phosphates is exceeded by the proportion of blood-salts present and available in drinking-waters and in the commonest food, it becomes a natural query: What is the value of such a preparation, especially as this is the point insisted upon as the chief basis for therapeutic value? According to the evidence presented by the author, the most common dietary would be the best possible therapeutic reliance, and one beside which the new medicament would be cast into obscurity. To be sure, in order to commend the product and make an imposing showing, it has received the high-sounding baptismal title of "Normal Saccharated Solution of Iron Manganese," but big words "butter no parsnips."

The height of absurdity is reached when the claims for a medicament are based on the proportion of constituents that must play an insignificant part in any preparation, especially when it offers no advantages over the ordinary iron and manganese medicaments in every-day use. The latter have rendered excellent service in the past, and are not likely to be superseded by an inert German preparation, even when possessed of a mouth-filling appellation and the claim of an infinitesimal proportion of blood-salts.

HAIR TURNED FROM WHITE TO BLACK BY COLD.

An engineer in the Fire Department of Louisville, age sixty-five years, was on duty during the tremendous fire in January last for fifteen consecutive hours. From two or three sections of hose near his engine the spray was constantly flying, and he became covered from head to foot with ice. He wore a skull-cap, and a helmet atop of that, so that his head was the warmest part of his body and not at all exposed, though his eyebrows and whiskers became wet and were frozen stiff. The afternoon after the exposure his hair, which had become gray eight years before, and had for three years been white, turned perfectly black. Formerly he was a blonde. Doctor George W. Griffith, who reports this case in the *Journal of Cutaneous and Genito-Urinary Diseases*, and who has known the man for forty years, declares that the hair is oily and not in the least dead, and that the patient's head has been very carefully scrubbed several times under the supposition the change in color might possibly be due to foreign matter.

Numbers of cases have been reported in which the hair has suddenly turned from black to white, but this is the first instance, we believe, known to literature, in which the reverse has occurred. Campagne tells of a woman, thirty-six years of age, in whom the hair began to blanch on the twenty-third day of a severe fever, and six days later was perfectly white; on the seventh day, however, the color began to darken, and in the course of a week the hair had recovered its original color. Van Harlingen narrates the case of an idiotic epileptic girl of thirteen years, who experienced changes in the color of her hair in consonance with her periods of agitation and calmness; sometimes the color was blonde, at other times red, and the variations in shade were great. Falkenheim, also, reports a man of thirty-three, whose hair was variegated, being in irregular portions of the scalp colorless and pigmented. In all cases reported by Wilson the ringed hairs were divided into quite regular bands.

EDITORIAL NOTES.

Oh! Oh!—

The following opening of a paper in one of our exchanges is "a light" by far too valuable to be "hidden under a bushel:"

> The abstrusity of conditions in an atomic aggregation of organic elements wherein automatism is exhibited, too often transcends the finite comprehension of the most intuitively endowed and erudite pedagogue or scholar, and we are left to grope about in darkness and danger in considering local or apparent pathological manifestations, whose origin occurs in such remote and seeming incongruous ways that the alert diagnostician is astonished at the great remove the object of his direct comprehension bears to the initiatory derangement, and whose insidious progress leads on to vital abnegation or transmutation, beyond which vicarious intermediation will not retrieve.
>
> Under the above caption of life's functional adversion we are invited to contemplate, to a limited extent, the prevalent expression of vital degeneracy

noticeable about the cirvo-gingival margins, and go back with the author to a remote inceptive principle of life to find the original seed of this membranous enemy.

. . . . Successful construction and perpetuity of any organic structure depend upon harmonious association of formative substances in cell individuality. This condition can only be exhibited by the necessary supply of proximate elements within the zone of their vital attraction. The latitude of cell action displayed in the result of their construction shows imperfection in proportion to the incongruous accretions they are forced to carry forward to their terminal destiny, and the unenduring result of the finish. Each anatomical division represents distinctive original characteristics, some with more attenuated histological construction, requiring a correspondingly delicate vital current of the purest composition to sustain up to the functional standard of physical welfare of the parts considered. Others supplied by the same blood stream require and obtain elements of entirely different chemico-vital composition.

What shall be done to a man like this? Is there any wonder that insane asylums are multiplied? If the intent is to "make trade" by fracturing the artificial dentures of readers, a fair measure of success is assured.

Value of a Black Cat.—

We have heard of a black cat skin poultice as a sovereign remedy for pneumonia and kindred maladies; also that a black cat was quite essential to the work of certain old beldams who sought notoriety as witches; but of its full black, or black-art, value we have but just been informed. A few weeks since an Austrian Pole was killed upon the Lake Shore Railway near Dunkirk, N. Y., and at the "crowner's quest" a Polish acquaintance accounted for the presence of the deceased in this locality, as follows:

He would not work, but spent his time looking for a black cat without a single hair of other color. He knew that if he could find such a perfectly black cat, and would take it to a cross-road at midnight, put it in boiling water, and then take a certain bone from the animal, it would make him invisible whenever he desired to be unseen. With that bone in his possession he intended to walk into a bank, and rob it in the presence of all the officers; he could go into a brewery and drink all the beer he wished; and in fact he would make himself and all his friends rich by unseen robbery.

The coroner obtained confirmation of this story by finding a number of cat's bones in the trunk of the deceased at his boarding-house. It is evident the police must now be up in the *black art*—mere *dirty work* is altogether insufficient.

Antidote to Carbolic Acid.—

Doctor Edmund Carleton—who is corroborated by Doctor C. S. Kinney, of the Insane Hospital at Middletown, Connecticut—declares the antidote to carbolic acid is to be had in every well ordered household, and is nothing more than simple cider vinegar. Knowledge of its specific worth came by accident. One day, while making some experiments with the pure acid, an unlucky movement sent two ounces of it into his hand, and though in two seconds he had the hand under a stream of water and washed it well, it became white and numb. There seemed to be no escape from the usual result — desquamation, and slow recovery of the sense of touch. But the odor was persistent and unpleasant, and, in the belief that it might be changed, a servant was sent for a cup of cider vinegar. While bathing and rubbing the affected parts with vinegar, to the amazement of Doctor Carleton there was complete restoration of color and function. In five minutes nothing remained in evidence except the modified odor.

Dealing from analogy, the inference is drawn that the acetic acid of the shops will prove equally satisfactory. Also attention is drawn to the fact that the bleaching and anæsthesia arising from carbolic acid closely simulate leprosy.

A Simple Code of Ethics.—

In his address to the graduating class of the University of Pennsylvania, Doctor H. C. Wood laid down a simple code, the gist of which is as follows:

Consider every member of the profession as one of your own family and having an inherent right to your medical services, but do not abuse this right; consider any discovery or invention you may make as belonging to the general profession; never in any way laud your own medical skill or attempt to supplant in public or private estimation one of your medical brethren; join as soon as may be the incorporated companies of your fellows for scientific and social intercourse and for the cultivation of that professional conscience which often binds men more

closely than their personal sense of right and wrong; through good and ill report stand by members of your own profession unless they be guilty of moral evil.

The Secret of Medical Success.—

In the December number of *The Practitioner* is a review of Sir Henry Halford, who was a famous court physician sixty years ago. It is said Sir Henry was "essentially a clinician according to the lights of his day. The theory of some of his contemporaries, that he worked himself into practice by Sir Pertinax MacSycophant's policy of 'booing' to the great, has, it may be supposed, an element of truth, but it is not the whole truth. The mainspring of his success was that he acted upon the principle laid down by himself—that the cure of disease is the physician's object, and he must not allow anything to divert his eye from that great mark."

That the cure of disease *is* the true business of the physician is manifest, yet the fact seems to be in some danger of being forgotten in these days when the laboratory is all-powerful, and bacteriology the acme of all knowledge.

Pilocarpine as Prophylactic of Diphtheria.—

In the *Wiener Medizinische Presse* Doctor Sziklai shows that pilocarpine is not only a certain and rapid remedy for diphtheria, but that it may be used as a prophylactic in epidemics, especially in homes in which a member of the family is already attacked. The prophylactic properties are also remarkable in croup and in pseudo-diphtheritic affections of the larynx. The author has used this remedy constantly during three years, and sometimes in large doses, without having seen any symptom arise of sufficient gravity to cause anxiety. He administers ten drops of a one-per-cent. solution of the hydrochlorate, three times a day; half this dose for children under one year.

The Gums in the Diagnosis of Phthisis.—

A red line on the gums is, according to the observation of Doctor Andreesen, of Yalta, frequently present in the subjects of pulmonary tubercle. Of eight hundred patients examined with reference to this sign, it was present in ninety-two.

A similar mark is at times observable on the gums of pregnant women. It is, therefore, of no value in pregnancy and the puerperal state, whatever it may be on other occasions.

Pleasant Recognition.—

Doctor John S. Billings, late Deputy Surgeon-General U. S. Army, on the evening of November 30th was presented with a check for $10,000 duly enclosed in a silver box, bearing the following inscription: "From 259 physicians of the United States and Great Britain, in grateful recognition of services to medical scholars."

The "recognition" referred to the inception and publication of the *Index Catalogue.*

Maragliano Serum.—

The *Boston Medical and Surgical Journal* declares that an Italian physician of New York, who attended the recent Medical Congress at Rome, brought home with him some of Maragliano's anti-tubercular serum, and claims to have used it with favorable results in three cases. The impression, however, gained from European exchanges, is that this serum is possessed of no value.

Strychnine in Pneumonia.—

In a report just issued, Surgeon-General Tryon, of the Navy, declares that "The favorable opinion entertained of strychnine in the treatment of pneumonia has been further strengthened by the experience in its use during the past year. Forty-five cases of acute lobar pneumonia were treated in the Naval Hospital in Brooklyn during the past twenty-four months, with thirteen deaths."

New Journals.—

Several new medical publications have recently appeared, or are to appear during the coming thirty days. The *American Medical Review*, a very creditable appearing periodical, has already reached our table, and apparently, from the number of announcements, the end of medical journals is not yet.

The Index Medicus.—

At last a full subscription list has been secured, and this journal will speedily reappear.

Items and News.

Diphtheria Antitoxin as a Culture Medium for the Diphtheria Bacillus.—

It is suggested that the heat required to coagulate the antitoxin destroys its bactericidal properties, but if that is so diphtheria bacilli ought to die when floating on fresh antitoxin and kept at a body temperature. On the contrary, I am afraid that the microbes would not only survive the treatment, but thrive upon it.

It has been held that we must look to Metschnikoff's theory for the true success of the action of antitoxin; that this product when introduced into the body stimulates "the living phagocytic cells." Now if this explains the remedial process, antitoxin must act either as a general stimulant or as a special stimulant. If it acts as a general stimulant to the phagocytes through the economy, I cannot see in what way diphtheria antitoxin differs in its action from half a score of other remedies, such as quinine or iron, which have at various times been credited with similar qualities. If, on the other hand, it is a special stimulant, and prompts these little bodies to devour Klebs-Loeffler bacilli and their toxins, many will consider that we are asked to mentally assimilate not only Metschnikoff's theory, but "*rudis indigestaque moles*" besides. —W. Ainslie Hollis, in *British Medical Journal.*

[This appears to be a question which a few simple experiments would settle.—Ed.]

Sugar and the Teeth.—

Doctor Vaughan Harley, in the Physiology Section of the British Medical Association, read a paper upon "Sugar as a Food," and, in addition to praising its virtues, denied some of the vices generally ascribed to this substance. He declared the popular view that sugar ruins the teeth is not borne out by observation; that people accustomed to take large quantities are not more liable to have bad teeth, but, on the contrary, have in many cases exceptionally fine ones; in support of this contention he cited the negroes of the West Indies, who are in the habit of taking large quantities of sugar and whose teeth are unexcelled as to soundness and whiteness.—*British Journal of Dental Science.*

Medical Women and the Royal College of Great Britain.—

The narrow majority by which the College of Physicians refuses to admit women is simply a last desperate flourish of the mop by the Mrs. Partington of medicine; the dear old lady would have done better to yield gracefully to the inevitable. The obsolete controversial weapons used against the medical amazons recall the bows and arrows of the "Children of the Mist," which so much amused Rittenmaster Dugald Dalgetty. I confess I do not see why the women are so anxious to get into the college, unless it be for the satisfaction of capturing the last citadel of the profession. It is certain, however, that now the men have shown a wish to keep them out, they will never rest till they get in.—*Ce que femme veut.*—Editorial in *The Practitioner.*

A Curious Accident.—

A "broken nose" is not an uncommon occurrence, but separation of the whole of the upper jaw from the skull is worthy of record. Mr. Hopkins reports a case admitted into the Swansea Hospital, of a man aged forty-nine, struck by a wooden beam on the back of the head and knocked forward against a coal truck so that the edge caught him at the root of the nose. The nasal and zygomatic processes were fractured, the superior maxillary bones both detached, and there was separation in the middle line of more than an inch. The frontal sinus and anterior ethmoidal cells were opened up, but the eyes escaped injury. The parts were kept in very good position by using a Smith's gag, which was worn continuously for a fortnight. —*British Journal of Dental Science.*

Second Sight.—

Doctor G. S. Ryerson narrated to the Toronto Clinical Society the case of a woman aged seventy-eight, for some years a sufferer from defective vision, who suddenly, one night when at church, felt something strange happen to her eyes, and upon looking at her prayer-book found she could read readily without glasses. The Doctor found upon testing the eyes that the sight was very good. He had always been very skeptical regarding the appearance of second sight, but this appeared to be a *bona fide* case, due probably to a swelling of the lens.—*Canadian Medical Review.*

Danger in Nicotine Fumigations.—

Doctor Fisher calls attention in an English newspaper to the danger of using nicotine fumigating liquids in fruit-houses where the fruit is required for immediate consumption. Six people speedily presented all the well marked symptoms of nicotism after partaking of some grapes from a vinery in which nicotine had been used to destroy insects. It

would seem best to limit the use of these preparations—which, from their efficacy as insecticides, are largely used—to green-houses where only flowers are grown.—*Druggists Circular.*

Agar-Agar in Glycerin Suppositories.—

Lomuller recommends agar-agar (*Gelidium corneum*) instead of gelatin in making glycerin suppositories, because it produces a more transparent mass that does not stick to the mould, does not clot, and gives a more elegant article when finished. Ten parts of agar-agar in small pieces may be heated in 200 parts of water, until a soft paste is formed, and then 200 parts of glycerin added, constantly stirring.—*Pharmaceutical Journal and Transactions.*

Worth Remembering.—

Medicine lacks much of being a fixed science, and the startling bigotry that leads to dogmatic hate and slander should be despised by all members of the profession—it is a crying shame to our most noble calling. The bigot in religion is to a shameful degree intolerant, but a bigot in medicine is intolerant to an infinite degree. In remaining a bigot he will never receive knowledge, because he deems himself already wise.—I. J. M. Goss.

The Retort Pertinent.—

A young physician who has just established himself, and with very little practice, is noted for his braggadocio. One of the older physicians, meeting him on the street the other day, asked how he was coming on. "I have got more than I can attend to," was the boastful reply; "I had to get out of my bed five times last night."

"Then why don't you buy some insect powder?"—*Omaha Clinic.*

The Poultice.—

This has recently been examined by Doctor R. W. Lovell, and he happily finds that it is "reasonably sterile and non-pathogenic." It would be hard indeed if the soulless searchers after microbes were to lay the ban upon this most comfortable and useful domestic remedy. How few mortals pass through this vale of tears without the occasional solace of hot pultaceous linseed!—*The Practitioner* (London).

Opotherapy.—

This is a term applied to the method of treatment recognized, if not indeed introduced, by the late Doctor Brown-Séquard, which comprises the injection or ingestion of glandular secretions or juices. It promises to secure for itself a prominent place in the therapeutical arsenal.—*Medical Press and Circular.*

Locomotor Ataxia.—

A new sign in tabes dorsalis is lack of pain when violent compression of the ulnar nerve is made, although the usual tingling of the finger is felt. This condition is present in seventy-five per cent. of cases, and occurs in no other form of organic disease that may be mistaken for this. (Biernacki.)—*Omaha Clinic.*

Cleaning Rusty Instruments.—

Brodie gives the following as an effective method of cleaning rusty instruments: Immerse in a solution of chloride of tin in distilled water, allowing to remain over night, then rub dry with chamois after rinsing with running water. They will be of a silvery brightness.—*British Journal of Dental Science.*

Opium in Cough-Mixtures.—

As a warning to all who are too ready to prescribe opiates in cough-mixtures, it should be noted that there are 1,500,000 individuals in the United States addicted to the habitual use of opium, and that many of these "opiophagists" date their habit from the use of cough-mixtures.—*Journal de Médecine.*

Potassium Iodide in Goitre.—

At a recent meeting of the Société de Thérapeutique, M. Fernand called attention to the dangers of potassium when administered to one suffering with goitre; even very small doses may induce coryza, dyspnœa, diarrhœa, trembling, cachexia, with symptoms of cardio-pulmonary paralysis.

Doctor Smith.—

This euphonious cognomen is the popular monosyllabic application of 1300 practicing physicians in the United States.—*Medical Record.*

Can't See It.—

When the German pathologists have whittled a point down to nothing, they keep right on whittling.—*Exchange.*

Words of Wisdom.—

Nothing worse can happen to the reputation of a book than to have it offered as a "premium."

Soap.—

Almost every kind of soap possesses excellent disinfectant properties.

Book Reviews.

THE BADMINTON MAGAZINE. Price, 30 cents; $3.00 per year. Longmans, Green & Co., New York.

The December number is even better than the four preceding, if such can be possible. Sir Herbert Maxwell, Bart., M.P., writes of "The Big Stag of Beinn Nan Nighean;" Montagu Shearman of "International Athletics;" J. M. Paulton, M.P., of "Recollections of the Cambridge Drag;" Maxwell Witham of "Skating Gossip;" Horace Hutchinson of "The Sportsman at School"—this paper offers more than a suspicion that the same gentleman is the author of "When We were Boys," which has appeared in several magazines; "The Story of an Orchid" is by Frederick Boyle; "A Run," by Alfred E. T. Watson, carries the reader into the hunting-field with all its vicissitudes, and enables him fairly to appreciate the situation of the fox when he finds all his arts and tricks are unequal to throwing off the hounds; "Sport in Victoria" is by the Earl Hopetoun; "Skilöbning in Norway"—pronounced She-lowbing—is by Mrs. Alec Tweedie; "Five Miles from Anywhere" is by Hedley Peek. Then follow the usual "Notes" by Rapier. The illustrations are in part from photographs; the remainder are by Thorburn, Berkeley, Davis, Brock, Jalland, Ashton, Speed, Gibb, and Linsell. Especially notable is a tail piece, a dolphin jumping, from a photograph from life. The other head and tail pieces, each of which is an art treasure, are from the collection of Mr. Hedley Peek, and we are happy to learn the supply is far from being exhausted. Verily there has never been so delightful a magazine as the *Badminton*.

ARCHITECTURE AND BUILDING. Price, 15 cents; $6 00 a year. W. T. Comstock, New York.

The two issues for December 7th and 14th offer excellent tables of contents in architecture, archeology, engineering, and decorating. In the former are discussed the "Character and Influence of the Year's Building;" "New York State Association of Builders;" "Specifications from a Builder's Point of View;" "Legal Notes;" "The Art and Work of Richard Morris Hunt;" "Award of Robert Clark Medals;" "Award of Fairmount Museum, Philadelphia." Notable among the plates and plans is the Morosini Mausoleum in Woodlawn Cemetery, New York; Sketch of a House of Sixteen Rooms on Massachusetts Bay Shore; The Residence of John Jacob Astor, New York; Residence of J. R. Bisk, Newport, Rhode Island; Residence of Elbridge T. Gerry, New York; Fogg Museum, Cambridge, Massachusetts. In the latter we note an editorial upon the New York State Association of Builders, and upon the New York Labor Report. There is also a second paper on "Fever Hospitals;" "Technical Education in Switzerland" is discussed; also Commissioner Russell's "Report on the New York State Capitol." Other articles of note are on "A New Translucent Roofing," "Dangerous Settlement of High Buildings in Chicago," "Tests of Concrete and Wire Flooring," and "A Library Window."

THE YOUTH'S COMPANION. Price, $1.75 per year. Perry Mason & Co., Boston.

It is impossible within the limits of a review to do justice to the interesting announcements made by the *Youth's Companion* for the coming year. Not only do the most delightful story-writers and ablest authors of the age contribute to the paper, but many of the most eminent statesmen, jurists and scientists of the world. No fewer than three Cabinet ministers are announced as contributors for 1896, among them the Secretary of Agriculture, who will discuss "Arbor Day;" Secretary Herbert, on "What the President of the United States Does;" and Secretary Hoke Smith, on "Our Indians." In a fascinating group of articles under the head of "How I Served My Apprenticeship," Frank R. Stockton tells how he became an author, General Nelson A. Miles gives reminiscences of his army days, and Andrew Carnegie recalls his earliest struggles in getting a business footing.

The publishers of the *Companion* offer new subscribers who will at once remit $1.75, a handsome four-page calendar for 1896 (seven by ten inches), lithographed in nine colors (of the retail value of fifty cents), the Thanksgiving, Christmas and New Year's double numbers, and the *Youth's Companion* from date to January 1st, 1897.

THE CANADIAN MAGAZINE. Price, 25 cents; $2.50 per year. Ontario Publishing Company (Ltd.), Toronto.

The December number is exceedingly interesting and full. "The Poet's Christmas Eve," illustrated, is by Charles Gordon Rogers; "The Castle of St. Louis, Quebec," by J. M. Le Moine; "Christmas Deer-Hunt in Uruguay," by Doctor G. Archie Stockwell; "The First Canadian Christmas," by J. H. Long; "The Loyalists of the American Revolution," by C. G. D. Roberts; "Oh, My Colleen," by Mrs. Watkins; "Ode to Silence,"

by W. W. Campbell; "Adele Berthier," by Thomas Swift; "A China Wedding," by J. C. Bell; "A Gentleman Adventurer of the Old Regime," by J. G. Bouirnot; "A Canadienne," by Reginald Gourlay; "Hall Caine," by W. A. Sherwood; "The New Colonial Secretary" (Mr. Chamberlain), by J. C. Hopkins; "Aulde Donald's Lament," by Clara H. Mountcastle; "Canada's National Song," by John A. Cooper; "Mount Royal," by Keppel Strange; "Faith-healing, Mind-curing, and Christian Science," by Doctor John Ferguson; "Nondescript," by Ella S. Atkinson; "Current Thoughts," by the Editor.

The North American Review. Price, 50 cents; $5.00 per year. North American Review Company, New York.

Contents for December: "The Work of the Next Congress," by M. W. Hazeltine, Thomas C Catchings, Jonathan P. Dolliver, George N. Southwick, and John C. Bell; "Cranks and Crazes," by Mrs. Lynn Linton; "The Last Gift of the Century," by N. S. Shaler; "How London Deals with Beggars," by The Right Honorable Lord Norton; "Results of the Bering Sea Arbitration," by John W. Foster; "Christianity's Milestone," by Goldwin Smith; "Benefits from the Nicaragua Canal," by A. S White; "Personal History of the Second Empire," XII, by Albert D. Vandam; "Wild Traits in Tame Animals," IV, by Doctor Louis Robinson; "The House of Representatives and the House of Commons," by Sir Reginald F. D. Palgrave; "Notes and Comments."

The Eclectic. Price, 45 cents; $5.00 per year. E. R. Pelton, New York.

The December number contains: "The New Spirit in History," by W. S. Lilly; "The Ethical Solution of our Social Problem," by Charles Ford; "The Story of Stambouloff's Fall," by Edward Dicey; "The English Officer," by Colonel Henry Knollys; "Gaps in Agnostic Evolution," by F. H. Hill; "A Khud in the Punjab," by E. Carrington; "Michaelmas Term at Oxford," by Frederic Adye; "Verdi, Then and Now," by F. J. Crowest; "A Medical View of the Miracles at Lourdes," by Doctor Edward Berdoe; "Book collecting as a Fine Art," by Julian Moore; "An Indian Station," by E. O. Walker; "Caught Napping," by P. W. Roose; "An Affectionate Son;" "Alexander Hamilton;" "Class Sympathies," by E. Lynn Linton; "Ants as Mushroom-growers, by A. L. Smith; "When We Were Boys."

The Decorator and Furnisher Volume XXXVII, No. 3. Price, 20 cents; $2.00 per year. The Art Trades Publishing and Printing Co., New York.

The December number is replete with good things. There are a number of designs for decorating windows of hall, parlor aud dining room; stencil for parlor frieze; colonial furniture; panels of grille work; screens and fret work, etc. Middle class furniture of the United States is discussed, with illustrations of Empire, Romanesque, Colonial, and Renaissance styles; also is given a bed chamber in the Byzantine style. Candace Wheeler gives some excellent hints regarding the decoration of walls. There are illustrated and described, moreover, a dining-room and Empire library in a New York residence, the library of Mr. H. B. Gilbert, and a Louis XVI. suite. The articles on "China Painting" are continued; "Decorative Textile Fabrics," including artistic needlework, etc., etc., receive another chapter, and there is also a continuation of "Oriental Carpets;" also hints for test of textiles. As a whole the number is a very valuable one.

The Monthly Illustrator and Home and Country. Price, 25 cents; $2.00 per year. The Monthly Illustrator Publishing Co., New York.

The December number is an art gallery in miniature. Seven of its illustrations are from a painting by Dagnan-Bouveret. The illuminated articles are: "The Nativity of Christ," by Henry Mann; "From Cuxhaven to Constantinople," by C. W. Allers; "A Book of Japanese War Caricatures," by Flora Lucas; "A Glance at William Hogarth," by Clarence Cook; "The Witches' Flight," by Charles G. D. Roberts; "Christ in Modern Art," by R. R. Wilson; "A City of Ghosts," by Violet E. Mitchell; "Men and Women of the Hour;" "Jean Valjean;" and "The Pottery of the North American Indians," by W. J. Hoffman.

McClure's Magazine. Price, 10 cents; $1.00 a year. S. S. McClure, Limited, New York.

Contents for December: "Abraham Lincoln," II, by Ida M. Tarbell; "The Love of the Prince of Glottenberg," by Anthony Hope; "Chapters of a Life," I, an autobiographic paper, by Elizabeth Stuart Phelps; "The Understudy," by Robert Barr; "The Heroine of a Famous Song," by F. P. Humphrey; "A Point of Knucklin' Down," by Ella Higginson; "The Sun's Heat," by Robert Ball; "Hall Caine," by R. H. Sherard; "Neighbor King," by Collins Shackleford; "Through the Dardanelles," by Cy Warman.

THE CENTURY. Price, 35 cents; $4.00 a year. The Century Co., New York.

The Christmas number contains: "The Passion Play at Vorder-Thiersee," by Annie S. Peck; "Sir George Tressady," II, by Mrs. Humphrey Ward; "Life of Napoleon Bonaparte," continued, by William M. Sloane; "A Midsummer Night," by Benjamin Kidd; "Shakspere," by H. J. Stockard; "Captain Eli's Best Ear," by F. R. Stockton; "Tom Grogan," I, by F. H. Smith; "Appeals to Lincoln's Clemency," by L. J. Perry; "Humperdinck's Hansel and Gretel," by Bernhard Stavenhagen; "The Brushwood Boy," by Rudyard Kipling; "Hear, O Israel!" by H. P. Spofford; "One Way Out," by J. A. Riis; "Glamour," by E. M. Thomas.

DONAHOE'S MAGAZINE. Price, 25 cents; $3.00 a year. Donahoe's Magazine Co., Boston.

Contents for December: "The Holy Childhood in Art," by Henry S. Hallett; "Moundbuilders of America" (continued), by Marquis de Nadillac; "Dramatics in American Colleges;" "The Real Ruler of Russia," by S. M. Miller; "Brother Basil," by Bernard Morgan; "What the Croupier Saw," by Mary F. M. Nixon; "Papal Avignon," by Warren Simmonds; "Madame La Duchesse," by Bessy B. O'Reilly; and other sketches, poems and stories by C. F. Fitts, E. Matheson, J. T. Connor, Madame de Cidoncha, D. J. Donahoe, Eleanor C. Donnelly, and F. H. Sweet.

AMERICAN NATURALIST. Price, 35 cents; $4 00 a year. The Edwards & Docker Co., Philadelphia.

The contents of the December number are: "Sargent's Study of the Forests of Japan," by Charles E. Bessey; "The Birds of New Guinea" (continued), by G. S. Mead; "The Classification of the Lepidoptera and Larval Characters," by H. G. Dyar. There are the usual departments devoted to Petrography, Geology, Paleontology, Botany, Vegetable Physiology, Zoölogy, Entomology, Embryology, Psychology, Anthropology, General Notes, Proceedings of Scientific Societies, Editor's Table, etc.

PHRENOLOGICAL JOURNAL. Price, 15 cents; $1.50 per year. The Fowler & Wells Co., New York.

The Deeember number contains a "Sketch of Doctor William J. O'Sullivan." by Edgar C. Beall; "How Three People Did Europe Afoot," by George C. Bartlett; "Duke and Duchess of Marlborough," by the Editor; "Practical Physiology," by H. S. Drayton; "What Your Palm Tells," by D. M. Morrell; "A Phrenologist Prediction," by Anna O. Commelin; "How to Treat Criminals," by T. A. Bland. There are the usual departments devoted to Child Culture, Science of Health, Editorial, etc.

OUTING. Price, 25 cents; $3.00 a year. The Outing Publishing Company, New York.

Notable features of the December number are: "A River Between," by Florence Guertin; "Skating," by Ed. W. Sandys; "Hunting the Caiman," by Edward French; "An Outing in Labrador," by R. G. Taber; "Caribou-hunting," by the late E. P. Rogers; "Lenz's World Tour;" "Touring Bermuda Awheel," by T. B. Dowden; and "On the Frontier Service," by Lieutenant G. W. Van Deusen.

ANNALES D'OCULISTIQUE. Volume CXIV, No. 4. Price, 50 cents; $5.00 per year. The Transatlantic Publishing Co , New York.

The October number contains: "A Case of Suppurative Irido-choroiditis," by V. Morax; "Pathogeny of Myopia," by G. Bitzos; "Subconjunctival Injections of Sublimate in Myopia," by De Bourgon; "Phlegmons of the Orbit," by E Pergens; "Ocular Manifestations of Vanillism," by Doctor Guérin. There are the usual "Reports of Societies," "Reviews," "Book Notices," and "Miscellany."

THE METAPHYSICAL MAGAZINE. Price, 25 cents; $2.50 per year. The Metaphysical Publishing Co., New York.

Contents for December are: "The Ethics of Work," by Alexander Wilder; "Concentricity: The Law of Spiritual Development," by J. E. Hotchkiss; "Emblems and Being," by C. H. A. Bjerregaard; "Evidences of Immortality," by J. E. McLean; "Occult Law," by Doctor W. W. Woolsey; "Perpetual Youth," by W. J. Colville; "More than Minerva's," by Lucy Cleveland.

SYSTEM OF SURGERY. Edited by Frederick S. Dennis and John S. Billings, M.D. Volume III. Cloth; 8vo; pp. 920. Price, $6.00. Lea Brothers & Co., Philadelphia.

The third issue of this most valued System sustains the reputation already gained. Surgery of the Larynx and Trachea is taken up by Doctor D. Bryson Delavan; Surgery of the Mouth and Tongue, by Henry M. Mudd; Diseases of the Salivary Glands, by Charles B. Porter; Surgery of the Neck, by Willard Parker; Surgical Injuries and Diseases of the Chest, by Frederick S. Dennis; Diseases of the Eye, by G. E. de Schweinitz; Operative

Surgery of the Eye, by Henry D. Noyes; Surgery of the Ear, by Gorham Bacon; Surgical Diseases of the Jaws and Teeth, by Louis MacL. Tiffany; Surgical Diseases of the Skin, by William A. Hardaway; Surgery of the Genito-Urinary System, by J. W. White and W. H. Furness; Syphilis, by Robert W. Taylor. There is a wealth of illustrations, a large proportion being new and especially prepared for this work. The only possible fault to be found is the occasional too high coloring of the chromo-lithographs—a fault that is with the method; yet even this is less apparent than in the majority of illustrations of the class.

No Proof. By Lawrence L. Lynch. Paper; large 16mo; pp. 354. Price, 25 cents. Rand, McNally & Co., Chicago.

Purported "detective" books have multiplied so fast of late years that the very suggestion thereof often tends to nausea, and that too in spite of the fact Conan Doyle has recently turned his attention to this class of literature. But Doyle's cleverness is sadly at fault in the exploitation of the marvellous in the detective line, since he considers the *denouement* first, and working backward fits the plot thereto—a procedure not calculated to favor the best literary work. By comparison Lawrence Lynch is the better author; his tales, however, are of *detection* rather than "detectives," and this last work is certainly superior to anything that has hitherto emanated from his pen. Indeed there are few modern novels so thoroughly satisfactory as "No Proof." There is nothing to slur or skip, no hanging of the tale, no loss of interest; the plot works steadily and evenly, until the culmination is reached near the final page; and the climax, though somewhat startling and dramatic, is very far from being commonplace.

United States Commission of Fish and Fisheries. Part XVII—Report for 1889 to 1891. Cloth; 8vo; pp. 664. Government Printing Office, Washington.

The contents of this volume include, aside from the Report of the Commissioner, an inquiry regarding "Food Fishes and Fishing Grounds," by Richard Rathbun; "Regarding the Methods and Statistics of Fisheries," by Hugh M. Smith; "Investigations of the United States Fish Commission's Steamer *Albatross* from July 1st, 1889, to June 30th, 1891;" "Oyster Fisheries of the Pacific Coast," by Charles H. Townsend; "Coast Fisheries of Texas," by Charles H. Stevenson; "Sparoid Fishes of America and Europe," by David S. Jordan and B. Fesler; "Fish Entozoa from Yellowstone Park," by Edward Linton; "Comparative Investigation of the Importance and Constitution of the Pelagic Fauna and Flora," by Ernst Haecke —the latter an especially valuable addition to zoölogical literature.

A Galloway Herd. By S. R. Crockett. Cloth; 12mo; pp. 298. Price, $1.00. R. F. Fenno & Co., New York.

This new story will be heartily welcomed by all admirers of Scottish tradition and literature, for Mr. Crockett is even in a way a rival of the great Sir Walter. The scene is laid in the part of Auld Scotia that Mr. Crockett has mortgaged for literary purposes, and the movement of the tale is quite in keeping with the author's previous literary efforts. But the new volume is none the less welcome for being thus characteristic. "A Galloway Herd" is a love story dealing with peasant characters, and the incidents have to do chiefly with the young wife and child of the scapegrace son of a Scotch minister. The story opens at the deathbed of the son in London, an old Scotch neighbor having found his way to the scene. Subsequently the young mother and child are installed in the farmhouse of this good old Scotchman, Sandy McQuhirr. The proper rewards and punishments are dealt out, and the book ends brightly and hopefully.

Twentieth-Century Practice. Edited by Thomas L. Stedman. Cloth; 8vo; pp. 841. Price, $5.00. William Wood & Co., New York.

This is the fourth volume of Wood's New International Encyclopedia of Modern Medical Science, and treats of diseases of the vascular system and thyroid gland. The first 454 pages are devoted to "Diseases of the Heart and Pericardium," under the authorship of James T. Whittaker, M.D., of Cincinnati. Then follow 186 pages devoted to "Diseases of the Blood-vessels," by Doctor Arthur Ernest Sansom, of London. The forty-eight pages devoted to "Diseases of the Lymphatic Vessels" are by Doctor Bertrand Lawson. The 134 pages devoted to thyroid diseases, viz., myxœdema, cretinism, exophthalmic goitre, goitre, malignant diseases, acute thyroiditis, tuberculosis, syphilis, actinomycosis and hydatid diseases of this organ, are by George R. Murray, M.B., Newcastle-on-Tyne.

Each author has written a very complete monograph, well elucidated by illustrations, A very comprehensive index adds to the value of the volume.

ANGLO-URDU. By Reverend George Small, M.A., and Surgeon-General C. R. Francis, M.B., M.R.C.P. and S., L.S.A. Medical handbook; cloth; 16mo; pp. 200. Thacker, Spink & Co., Calcutta.

This is a handbook of Hindustani, published with special reference to medical practitioners, pharmacists, missionaries, etc., who purpose entering the field of Northern India. Such a work must prove of great value to these, prior to leaving home, and will furnish abundant material for primary grounding in the language, though a grammar would subsequently require to be added. A work of the latter character in Romanized letters by the same author is also published by the same house.

The work is of great practical value to pharmacists, chemists, and physicians who desire to familiarize themselves with Hindustanese synonyms and Oriental medicine, for one of its most valuable constituents is a descriptive catalogue of native remedies arranged alphabetically, in connection with which appears much detailed material that can nowhere else be found.

THE WISH. By Hermann Sudermann. Paper; 12mo; pp. 296. Price, 25 cents. Rand, McNally & Co., Chicago and New York.

This, No. 218 of the ever popular Globe Library, is somewhat weird and startling in character, dealing as it does with the crimes —if such they may be called—of mentality. A girl finds herself in love with her brother-in-law, and, when her married sister is upon her death-bed, is frightened by discovering that she entertains an imperfectly but yet palpably defined wish that she may die. The expiation begins with the realization of this wish, and consists of self-denial and refusal of the sister's husband; and when in a moment of passion she reveals her love to its object, the upbraidings of conscience drive her to suicide.

HAND BOOK FOR HOSPITALS. By Amy Howard Woolsey. Third edition. Cloth; 16mo. Price, 75 cents. G. P. Putnam's Sons, New York.

The value of the publication may be judged by the fact it is now in its third edition, the first having been issued in 1887. No other work can be found that can supply its place, and it was especially written for the use of visitors of the New York State Charities Aid Association.

THE NORTH AMERICAN REVIEW.

Among special features of extraordinary importance which this well known review has in preparation for 1896 is a series of articles by the Right Honorable W. E. Gladstone on "The Future State, and the Condition of Man in it." The series will begin in the January number.

Therapeutic Brevities.

Ferratin. — Professor Schmiedeberg has succeeded in producing this substance by artificial means, in the form of a fine powder of red-brown color, like oxide of iron. Two forms are known to commerce — the one simple and insoluble in water, the other a sodium compound which readily dissolves on stirring after being allowed to stand a little while in water. The latter must be as free as possible from lime, otherwise an insoluble calcium compound is formed. Ferratin, in contradistinction to those compounds of iron hitherto in use, is readily assimilated and does not produce any unpleasant disturbances in either the gastric or enteric functions, even when used for a lengthy period; indeed, in some cases its exhibition seems to produce improvement in the appetite and regularity in defæcation. As a portion of the substance is decomposed by the acid gastric juice and also by sulphuretted hydrogen, a sufficient quantity of Ferratin must be ingested to leave an overplus in the bowel-tract so that the organism may pick up as much as it requires. There is no necessity whatever to anticipate overloading of the organism with the iron, as absorption and excretion appear to be mutually controlling. Excretion does not take place through the kidneys. The daily dose for adults is fifteen to thirty grains; acids should be avoided, but no other restrictions are necessary. Schmiedeberg points out that Ferratin is first and foremost a food, and its use is indicated in all cases in which nutrition and blood-formation are unsatisfactory.

Banholzer, of Eichhorst's clinic, declares that in anæmia following acute disease the hæmoglobin was quickly increased five per cent. in eight days, as also the number of red cells, by Ferratin; and in chlorosis the same results were visible in even a more marked degree. The general condition was improved, the increase in weight in most cases considerable, and the good effects on the appetite were obvious. Harold found, in three cases of severe anæmia, the preparation exerted a remarkable hæmatinic effect; it did not interfere with digestion or produce any constitutional disturbance. In one of the patients, reduced iron had been given for twelve months without benefit.—DUJARDIN-BEAUMETZ, in *Annual of the Universal Medical Sciences.*

Sexual Torpor in the Female.—Physicians are often consulted because of lack of sexual appetite in woman; the general health, and

the sexual functions likewise, should be attended to in order that any abnormality or functional disorder may be discovered. A useful remedy is:

℞ Extract nux vomica, 15 grains.
Extract cannabis Indica, 15 grains.
Aqueous extract aloes, 3 grains.

Make fifty pills. Dose, one after each meal.

Another is:

℞ Phosphorus, 1 grain.
Carbon bisulphide, 40 minims.
Oil of almonds, 10 drachms.
Magnesia, q. s.

Make 100 pills, which should be gelatin-coated. One should be taken after each meal.

Musk, vanilla and santal may be tried, all of which have reputation as aphrodisiacs; small doses of cantharides likewise are often useful. The following oftentimes proves a valuable combination:

℞ Powdered vanilla, 45 grains.
Powdered canella, 45 grains.
Powdered mace, 15 grains.
Powdered black pepper, 5 grains.
Powdered nux vomica, 5 grains.
Powdered carbonate of iron, 4 grains.

Make ten capsules. One after each meal.

Sometimes minute doses of opium, taken just before retiring at night, may prove useful. Cocaine also has some value in this direction, but is objectionable owing to the liability of contracting the habit.—Doctor Lutaud, in *Maladies des Femmes.*

Nocturnal Enuresis.—Strumpf remarks that when a few drops of urine escape into the deep urethra a desire to urinate follows. Consequently he theorizes that during sleep the sphincter of the bladder is apt to become relaxed, and when a child lies horizontally in bed a little urine passes the sphincter, enters the deep urethra, and causes strong reflex action of the detrusor, when the bladder is emptied.—It is well known that in nocturnal enuresis in children the urine does not leak away gradually, but is emptied at once. In order to prevent the passage of the urine into the urethra during sleep, a simple expedient is adopted, namely, the elevation of the pelvis, so that an accumulation of urine of ordinary amount will gravitate back and distend the fundus, and not press against the sphincter. The elevation is secured by allowing the child only a single small, flat pillow under the head, and placing one or two ordinary pillows under the thighs so that they are at an angle of 130 to 150 degrees with the spine. This measure proved successful in twelve cases; it was, however, found necessary to continue the treatment for three weeks before the children were able to return to their former sleeping position without relapsing.—*Boston Medical and Surgical Journal.*

Cough-Mixtures without Opium.—The well known sedative and tonic mixture of Warburton Begbie is thus given in the Pharmacopœia of the Edinburgh Royal Infirmary:

℞ Dilute hydrocyanic acid, ½ drachm.
Dilute nitric acid, 3 drachms.
Glycerin, 1 ounce.
Infusion of quassia, to make 6 ounces.

A tablespoonful in a wineglass of water, three times daily.

Another valuable cough-linctus without opiate is said to consist of:

℞ Dilute hydrobromic acid, 1 drachm.
Spirits of chloroform, 1 drachm.
Syrup wild cherry bark, and mucilage, to make 1½ ounces.

A drachm as required.

—*The Practitioner* (London).

[A like mixture, which has afforded great satisfaction, is composed of equal parts of syrup chloroform, syrup tar, syrup wild cherry bark, and syrup tolu, the dose being one drachm as required.—Ed.]

Acute Rheumatic Endocarditis.—As soon as the first indication of a *bruit* makes its appearance, give sodium iodide in ten-grain doses thrice daily, in addition to the salicylates, and apply a blister of the size of a florin over the apex; as soon as the irritation of this blister subsides, a second may be applied close to it; then a third, and so on—the patient being kept meantime as quiet as possible, exertion, exposure, and excess of nitrogenous food being strictly forbidden. A gradual subsidence of the *bruit* will frequently be noticed in from seven to ten days. Of thirty-nine cases thus treated, twenty-nine were discharged with normal heart-sounds, ten with a *bruit.* This exceptionally good result may be in part due to prolonged rest, the average duration of hospital residence being forty-one days, and of confinement to bed thirty-six days.—Doctor Richard Caton, in *Liverpool Medico-Chirurgical Journal.*

Lupus Vulgaris Treated by the Burning Glass.—After having been under varied treatment for lupus vulgaris by different brethren of the profession, I hit upon the idea of destroying the tubercles by concen-

trating the rays of the sun under a lens—thus destroying by a burning process. By this means I was completely cured, and there has been no return during four years. I have since treated other patients and brought the method to the attention of many physicians, who have approved of it.—M. Mehl, in *Neue Heilkunst.*

[This is by no means a new proposition, but has been advocated several times by practitioners in the United Kingdom, on the Continent, and in America; it has been employed also with greater or less success by Orientals. In 1867, an account of a similar procedure appeared in *Braithwaite's Retrospect*, the author claiming it to be "a painless method, as the nerves are destroyed at once."—Ed.]

Tapeworm.—Doctor Wilson recently exhibited before the Toronto Medical Society a tapeworm tied in two knots, recently passed in this condition by a girl three years of age, who had a history of dieting on raw meat. The anthelmintic employed was pumpkin seeds. In adults he obtained the best results from thymol, given in twelve-grain doses every fifteen minutes until two drachms were taken.—A dose of castor oil should be administered the preceding night, and the patient refrain from taking supper or breakfast. About twenty minutes after the last dose a purgative is given. If the thymol depresses the circulation, whiskey may be administered concurrently.

Doctor Oldright remarked he used pumpkin seeds a good deal. One method of preparing was to take a half-pound, bruise in a mortar, add one quart of water, and allow to macerate all night; then strain, and add enough water to make a pint, and give after fasting. Two hours afterward an active purgative should be given.—*Canadian Medical Review.*

Which Canaliculus to Slit.—In the use of the large probes it may seem a matter of no importance whether the upper or the lower canaliculus is selected to suffer the necessary mutilation. The results, however, are far better and more easily attained by selecting the upper instead of the lower. I adopted this method many years ago from observing many patients who had been treated by division of the lower canaliculi, whose nasal ducts were perfectly patent, but who nevertheless still suffered from constant epiphora, and whose watery eyes were noticeable to the most casual observer. Since I have divided the upper canaliculus there has been no failure to relieve the epiphora where I succeeded in curing the stricture.—Doctor J. B. Story, in *Ophthalmic Review.*

Chestnut Leaves in Whooping-Cough.—The fluid extract of Chestnut Leaves was first recommended for whooping-cough in 1862, and since that time has been used by the profession to some extent, but not as generally as it should be. Ten drops may be given four times a day in a little sweetened water. Of twenty-five cases—three under six months, six under two years, the others from two to fifteen years of age—Castanea completely relieved each and every one in from eight to fourteen days. In experimenting with this drug for other coughs, I have not seen the slightest improvement; its sphere of action, therefore, would seem wholly in the relief of pertussis.—Doctor Ingalls, in *Medical Times.*

Cold Air for Consumptives.—There are now six sanitariums in Germany at which consumptives are treated by constant exposure to air at a low temperature. Currents of cold air are allowed to pass through the bedroom at night, and during the day as much of the time is spent in the open air as possible. The pure cold air quiets cough, lessens temperature, arrests night sweats, improves appetite, and modifies or arrests the course of the disease. Observations made in these sanitariums have developed the interesting fact that it is exceedingly rare indeed that infection of healthy persons by contact with consumptive inmates is observed.—*Kansas Medical Journal.*

Palliative Treatment of Hay Fever.—Discard the use of sprays, and apply to the nostrils, on a cotton pledget, an unguent composed of six parts cocaine muriate, ten of carbolic acid, twenty of menthol, 120 of oil of sweet almonds, 240 of zinc ointment.

While in this preparation cocaine is not the dominant ingredient, for some unexplained reason it is more active than cocaine in other forms. It is rare to find a case in which this application does not give almost immediate relief; at the same time general constitutional treatment should not be neglected.—Doctor F. G. Smith, in *Medical Record.*

Bryonia Alba.—Among the varied disorders of the heart, there is one variety of disease that is powerfully affected by this remedy. I

refer to a weak and delicate or worn-out individual who experiences a very depressed and irregular condition of the heart as the result of sudden calls upon his strength or nervous system. Even in organic troubles where the heart appears to be doing its work fairly well, and when from one of the above-named causes "a bad spell" comes on, especially if in connection with exposure and rheumatic twinges, there is no agent which has such rapid and powerful influence as Bryonia if combined with absolute rest in bed.—*Clinique.*

Antitoxin in Diphtheria.—Welch, of Johns Hopkins, in a review of the antitoxin treatment of diphtheria, points out that to be of most benefit it should be used early—that it does not counteract secondary infections. He considers its effects are due to its action on the living cells of the body. He says that clinical experience shows that cases of diphtheria inherently refractory to timely treatment with antitoxin are most exceptional, if indeed they occur at all. As to the sequelæ, he says the weight of evidence is that nephritis is far less common in cases early treated with the serum, but that it is questionable whether albuminuria is.—*Canadian Medical Review.*

Lactophenin. — This crystalline powder, slightly soluble in water and with a somewhat bitter taste, produces a decided hypnotic effect. Von Jaksch found that in typhoid fever it always rapidly reduced the temperature and exercised a calming effect over restlessness and delirium. He employed it in pneumonia, erysipelas, and influenza, with the result that it nearly always reduced temperature, and that too for considerable time, without any untoward action upon the heart or respiration. The great value of the drug appears to be its sedative and antipyretic effect.—DUJARDIN-BEAUMETZ, in *Annual of the Universal Medical Sciences.*

Measles.—Measles in young infants may be followed by troublesome pulmonary symptoms and severe inflammation of the eyes. In a recent case with the above complications, Doctor Wells found fluid extract of Eucalyptus, in five-drop doses, gave relief from distressing cough. For the eyes, solution of mercuric chloride (1 to 12000) was employed, a drop or two being instilled twice daily, followed by washing with solution of borax in warm water.—*Philadelphia Polyclinic.*

Varicose Veins.—Internal treatment is of very little benefit, and application of elastic stockings or bandages only affords some support. The preferable course to follow is to operate, subcutaneously, by passing a needle through the integument, round behind the vein, and out at the point of entrance; the catgut ligature is then tied, which obliterates the vein; or the vein may be cut down upon for several inches of its course, the upper and lower ends ligated, the intervening section removed, and the wound carefully brought together. Strict aseptic surgery should be followed to avoid septic phlebitis.—JOHN B. ROBERTS, in *Philadelphia Polyclinic.*

Fevers.—Nature's method of reducing fever is by evaporation from the skin—by perspiration,—by exhalation from the lungs, by urine, and by discharges from the bowels. Strict attention should be given all these functions, and assistance furnished by such remedies as will accomplish the desired result with the least departure from and interference with normal action. Antipyretics which are at the same time stimulants are most worthy of confidence.—*Atlanta Clinic.*

[This class of antipyretics excludes the synthetics and "*antis*," which are one and all nerve-depressants.—ED.]

The Dangers of Thyroid Feeding.—It is coming to the notice of physicians, that thyroid tablets are being used by the laity, especially by women who are desirous of ridding themselves of superfluous fat. As a result dangerous symptoms have been observed, and Doctor Eulenberg reports a case in which the patient took six tablets a day with the result of severe nervousness and cardiac complications.

There can be no doubt that the use of thyroid tablets is dangerous and should only be employed under careful supervision.—*Medical Record.*

Absinthe in Epilepsy.—This beverage is a remedy that I have been using for over twenty years in various nervous affections, more especially in epilepsy. I have derived more benefit from Absinthe in mild and in severe attacks of this disease than from any other remedy. I was first induced to give it in such cases from various accounts I had met with in French journals of its effects when used as a common drink.—DOCTOR JAMES KITCHEN.

Bronchial Adenopathy.—Each morning, fasting, a wineglassful of sulphuretted water with a little warm milk; cod-liver oil; one sixty-fourth to one thirty-second grain of sodium arseniate daily, at meal times, followed in fifteen days by phosphates, tar-water, or terpin. As calmatives, two to three drops of belladonna tincture, and the same quantity of alcoholic extract of aconite root, and syrup of codeine. Revulsion of the affected area with iodine or croton oil. If possible, a season at sulphur springs to complete the cure.—Jules Simon, in *Bulletin Général de Thérapeutique.*

For Relief of Night Sweats. — Hydrastis canadensis produces excellent results. If a single dose of twenty to thirty drops of the fluid extract does not suffice, give twenty-five to thirty minims two or three times daily; in nearly every case the sweats will be overcome. One writer reports seventy out of seventy-three cases of night sweats in tuberculosis radically relieved by this measure.—*National Medical Review.*

Cough of Phthisis.—This may often be relieved by a teaspoonful, taken in water before meals, of the following mixture:

Perchloride of iron, 3 drachms.
Creosote, $\frac{1}{20}$ drachm.
Alcohol, 1 ounce.
Glycerin, 2 ounces.
Compound tincture gentian, 2 drachms.
Malaga wine, to make 8 ounces.

—*The Practitioner* (London).

Distilled Water. — There is a growing opinion among medical men that pure distilled water is very much better than any mineral water in the market, in Bright's disease and other kidney affections, and the best among the mineral waters are those that have the least minerals in them, or, in other words, that come the nearest to pure water.—Doctor E. C. Price, in *Southern Journal.*

Cannabis Sativa.—My greatest experience has been in the treatment of phthisis pulmonalis, and here I cannot speak of this drug too highly, for, while it most perceptibly relieves the cough, it aids the patient by its stimulating and exhilarating qualities, supplying a remedial agent in a manner which in my opinion no other drug can so beneficially do.—Doctor Lees, in *Medical Record.*

Senile Heart.—Cardinal rules with regard to diet.—There must never be less than five hours between meals: No solid food ever to be taken between meals: All with weak hearts should have their principal meal in the middle of the day: They should have their meals as dry as possible.—Balfour.

Earache.—In the majority of cases this is caused by beginning inflammation of the middle ear, and in a few instances by neuralgia from exposure. The pain is often readily relieved by filling the ear full of warm water and giving aconite internally, or aconite and pulsatilla.—*Exchange.*

Alstonia Constricta.—According to Doctor Deitz, this drug is very useful in "disorders peculiar to women, which frequently prove quite rebellious even under the most carefully conducted treatment." Debility dependent on lack of digestive power, is its keynote.

A Hint for Chloroform Anæsthesia.—Rosenbury advises, before administering chloroform, spraying the nose with cocaine solution. By this means the reflex action of the heart is prevented and anæsthesia more readily produced.—*Medical Times and Hospital Gazette.*

Strychnine Poisoning.—When strychnine has been taken by mistake, or purposely, its effects may be counteracted by teaspoonful doses of tincture of Cannabis Indica, given every five to ten minutes until six or eight doses have been taken.—*Prescription.*

Croup.—Two drops of fluid extract Jaborandi every hour will be found to afford material benefit. It is especially indicated in those susceptible to hoarse cough, suggestive of croup, on every change of the weather.—*Medical Brief.*

Elephantiasis of the Extremities. — Doctor Neff suggests, and moreover claims excellent results from, the use of rubber bandages in connection with an ointment of mercury nitrite (one drachm to the ounce) well rubbed in.

Value of Cotton-root Bark. — In doses of twenty to thirty minims of the fluid extract, continued for several days, this drug is most valuable in metrorrhagia, hæmoptysis, hæmaturia, and epistaxis.—*Exchange.*

Medical Progress.

THE MAD-STONE HUMBUG.—J. G. Pringle, of Marlin, Tex., has a mad-stone, and a long list of cures which it has effected.

Doctor McKinney, of Pinckneyville, Ind., owns a mad-stone, which he will match against a case of hydrophobia.

Captain J. L. McCormack, of Knoxville, Ia., has a genuine bezoar stone almost as large as a man's fist.

The most noted Sucker State mad-stone was formerly owned at Bloom, Cook County, Ill., by one Charles Santer. Old settlers of the place mentioned may know the present address of Santer.

J. F. Cooper, of Lumkin, Ga., owns a mad-stone, which is not only a champion on snake and mad-dog bites, but also cures neuralgia, toothache, etc.

The editor of the *Nashville* (Tenn.) *American* is in possession of a mad-stone, which has a record of nearly forty years of continued usefulness, during which time it has cured dozens of rattlesnake bites.

Doctor F. W. Harper, of Lockland, O., claims that he was once cured of hydrophobia by the timely application of a mad-stone, in the possession of parties living at Rising Sun, Ind.

Mrs. George White, of Oskaloosa, Ia., is the proud owner of a mad-stone in the shape of a whitish, gray-colored, porous-looking stone, which she obtained in Scotland thirty years ago.

The famous "Piper Mad-stone" is owned by a family of that name, who reside in Terre Haute, Ind., and there are hundreds of happy Hoosiers who are willing to testify on oath to the efficacy of that valuable little stone.

Mrs. J. M. Parks, of this city (street and number not known), has a fine mad-stone which she says is sure to effect a cure if applied before convulsions set in. It was found several years ago by her husband at Magnesia Springs, Fla.

T. M. Orton, of Denver, a little village near Carthage, Ill., is the owner of a mad-stone with which he has successfully operated upon scores of people. Among the cures effected, the most remarkable was that of Hugh Rice, of Piper City, Ill.

The best known mad-stone now at the command of the hydrophobia victim of the South belongs to the family of ex-Governor Walker, of Tallahassee, Fla. It is about an inch and a half in length, of a grayish color, and with a greed for rabic poison which is characteristic of all such stones.

John Nelson, of Savannah, Mo., has a mad-stone which is said to have the most wonderful record of "cures" of any similar talisman in the State. Since it has been in operation the mad dogs of Northern Missouri and Southern Iowa have had no show at all.

J. M. Estes, of Osceola, Clark County, Ia., is the owner of a mad-stone which he is ready to defend with his pen at any time. It is a little bezoar, which in days gone by worked miracles in the States of Virginia and Ohio.

For many years the most noted mad-stone in the Mississippi Valley belonged to Turner Evans, of Paris, Linn County, Ia. I understand that of recent years it has been so frequently boiled in milk to eliminate absorbed rabic virus that it has been rendered unfit for use.

One of the most noted mad-stones now owned in this State is in the possession of the family of the late Stephen Smith, who lives on the Manchester road, between this city and Sutton Station. It is about the size of a hen's egg, and is said to resemble a piece of cake in texture, color, and specific gravity.—*St. Louis Republic.*

POISON OF THE ORNITHORHYNCHUS.—The Physiological Laboratory of the University of Sydney publishes the observations by Doctors C. J. Martin and F. C. Tidswell on the femoral gland of the ornithorhynchus, and its secretion, with an experimental inquiry concerning its supposed toxic action. The essay contains a good historical *résumé* of information in regard to the spur of the ornithorhynchus and the gland attached to it, from the first notice of it in 1802 by Horne (who thought the spur was a copulative organ), to Jamieson, who in 1817 discovered the gland connected with the spur, the duct of which traversed the spur, and the secretion of which he had observed to produce a poisonous effect on a man who had been endeavoring to capture a specimen after it had been wounded. Bennett and Owen were disinclined to admit that it was an organ of offense, while Anderson Stuart has no doubt that it is, and adduces cases of dogs which suffered severely from the action of the poison, and his opinion coincides with that of Doctors Martin and Tidswell. These observers have carefully examined the anatomy of the organ in question, with the following results:

"The glands are whitish, uniform, situated on each side of the spine over the acetabulum and the femur, and just outside the gluteus maximus, and rest on the rectus, iliacus, and glutei medius and minimus muscles. The duct emerges from the posterior half of the

outer border of the gland, runs down the back of the leg to the tarsus, where it dilates into a sac and is then continued along the spur. The spur is about half an inch long and is attached to a supernumerary tarsal ossicle. The gland is invested by a layer of smooth muscle and is of a compound racemose type; the alveoli are buried by a single layer, or in one case by four layers, of epithelial cells, the contents of which are granular. The duct, though apparently single, contains two or three channels imbedded in white fibrous tissue, without any admixture of smooth muscular tissue. Neither in the living nor in the dead animal can the secretion be made to exude by pressure. Chemical examination of the secretion shows that it contains proteids, and that these consist chiefly of some form of albumin, with a little proteose, but no nucleo-albumin. The results of experiments on various animals showed that there was an analogy between the venom of Australian snakes and the poison of the platypus, since both owe their toxic properties to proteid constituents; that they both retard or prevent the coagulation of the blood when slowly introduced into the system in small doses; that they both cause intra-vascular clotting when injected into the veins in sufficient doses; that they both cause an almost instantaneous drop in the pressure of the blood; and that they both cause capillary hæmorrhages and œdema when locally applied."

There is reason to believe that the secretion of the platypus is chiefly venomous at some particular season of the year, especially about the month of June.—*The Lancet* (London).

Myomata of the Bladder.—MM. Ferrier and Hartmannn have collected clinical details of sixteen undoubted cases of vesical myomata in which histological examination was made; the patients varying in age from twelve to seventy-four years. True vesical myomata are comparable to uterine myomata, arise in the thickness of the muscular layer of the bladder, and tend to become encapsulated, but, owing to the thinness of the vesical wall, project on one or other surface of the organ—*i. e.*, they project either into the bladder or into the abdomen. In the sixteen cases, ten were of the first character, four of the second, one an infiltrating myoma, and one presented an example of both varieties. Myomata projecting into the abdomen have a tendency to become pediculated in the peritoneal cavity, or to spread in the cellular tissue, and like uterine myoma vary in size from a small nut to an adult head, and may weigh several pounds. As a rule they are well defined, and the mucous membrane covering them may be either healthy, inflamed, ulcerated, or even partially calcified. In two instances the surface of the tumor became the seat of an epithelioma, and in one the ulcer penetrated the scar of a hypogastric incision, projecting outside in the form of an enormous gangrenous mass. Other alterations of the urinary apparatus are often seen, viz., chronic vesical inflammation with columnar hypertrophy of its wall and an ascending inflammation of ureters, etc. In two cases the tumor had compressed the terminations of the ureters, leading to a double hydro-nephrosis. Clinically the symptoms differ according as the myoma grows into the bladder or towards the peritoneum. In the latter instance there are no vesical symptoms except increased frequency and some difficulty of micturition, and here the diagnosis may be very difficult. Where myomata project into the vesical cavity, diagnosis is much easier, as the usual symptoms of vesical growth are present, and their form and consistence closely resemble uterine fibromata; symptoms may, moreover, vary according to the posture of the patient. Hypogastric, vaginal, rectal, and bimanual examination, with a sound in the bladder, may give valuable information as to shape, volume, consistency, and mobility.

In myomata of the excentric variety, laparotomy only can afford relief; in the vesical form, hypogastric cystotomy is necessary. It is suggested that the wound left in vesical mucous membrane, after removal of the tumor, should be sewn up.—*Quarterly Medical Review.*

Hysteric Simulation.—Doctor Mikuliez recently communicated to the Breslau Medical Society an interesting case of hysteric simulation in a woman of fifty-one years. After a slight trauma, in 1891, she was seized with pain and vomiting of blood, and later with fæcal vomiting. These ceased, but reappeared during the summer of 1892 in a more violent manner. The attending physician diagnosed a stricture high up in the rectum, and applied gradual dilatation with bougies. After transient improvement, fæcal vomiting again set in, and a trial explorative laparotomy was done, but nothing abnormal was found. Later there developed an abscess in the vicinity of the sacrum, followed by a free interval of several months. In 1893 vomiting again appeared, when a preternatural anus was formed, and, though it functionated well, the vomiting did not cease. Later,

during the same year, she visited another physician, who amputated her right breast. The vomiting then ceased. She came to Mikuliez to be freed from her intestinal fistula, to which the anus preternaturalis had dwindled. This was operated on, the intestine loosened from the abdominal wall, and the gut sutured. Healing took place uneventfully, but all of a sudden she was taken with violent abdominal pains and fæcal vomiting, and demanded that another artificial anus be made. In the meantime there was a great discrepancy between the vomiting and the necessary meteorism and peristalsis, while the good condition of her general nutrition contrasted with her frequent vomiting seizures—often twenty a day. In her vomit were found scybalæ, such as would be formed in the large intestine, though the fæcal vomiting of obstruction is generally liquid. The physician, therefore, was no longer in doubt that she was hysterical, and had her carefully watched, but without result. As she was being presented at a clinical lecture, she vomited up some fæcal lumps covered with mucus. A stomach-tube was immediately introduced, and the gastric contents found to consist of innocent, sour-smelling and half-digested food, without the slightest trace of a fæculent odor, while that which she had just thrown up had a pronounced odor of fæces and a neutral reaction. The patient had undoubtedly extracted the fæces from the rectum, and secretly put them into her mouth. In this manner she had succeeded in deceiving physicians for years, and led them to do one capital operation after another. —*Hospitals-Tidende.*

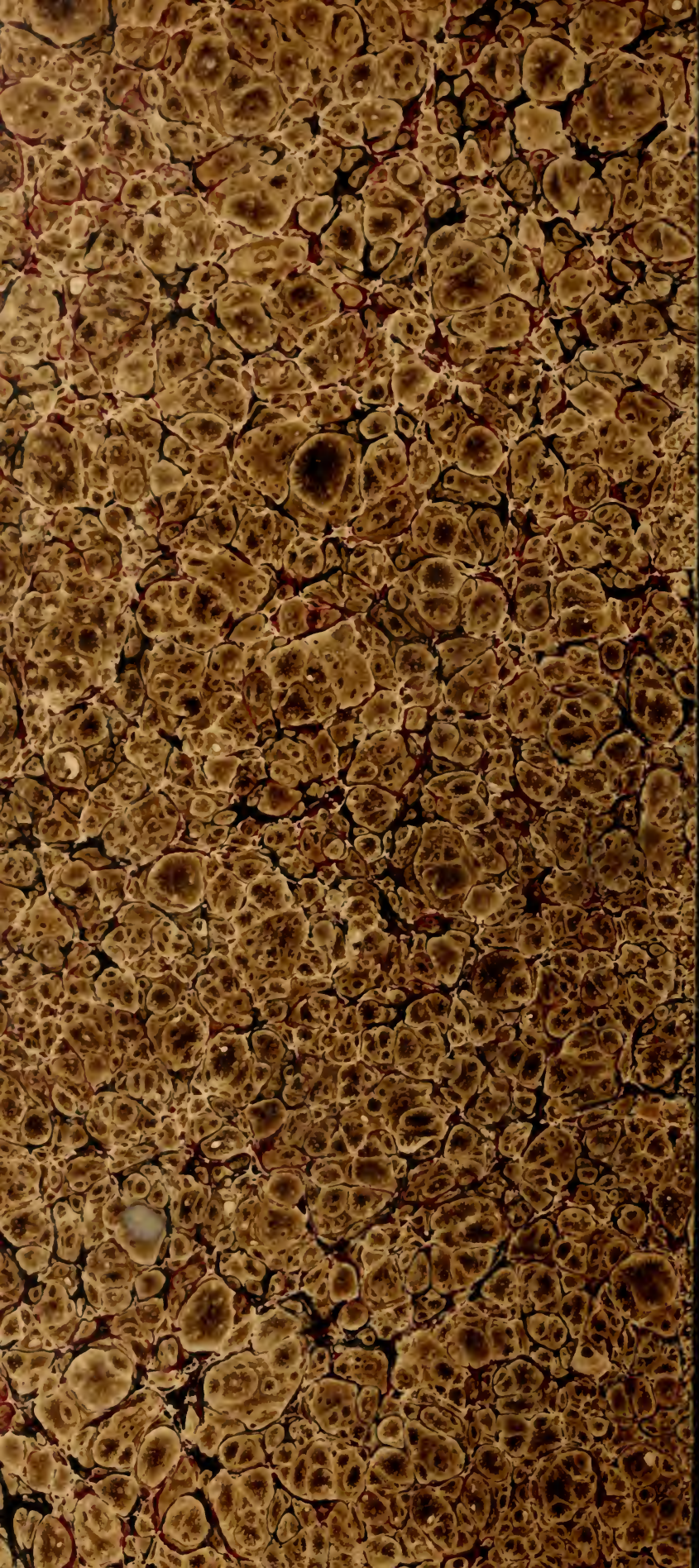
Extra-genital Syphilis.—In children the primary chancre is rarely found, and the method of infection is almost always the same: the father brings the syphilis into the family, gives it to the mother, who does not perceive it until the lesions are evident and when the child is already contaminated. Generally the door of entry is the mouth, and the sign which draws the attention of the mother is the inflammation of the submaxillary glands. The evolution of infantile extra-genital syphilis is variable; in general it is very favorable, and in this respect forms a striking contrast with hereditary syphilis. Extra-genital syphilis in the adult appears generally in the form of a primary sore, and usually the lips are the point of origin.

Extra-genital infection varies greatly according to the country. In Russia it sometimes reaches from fifty to ninety per cent. of all syphilitic cases, especially in the country districts. It is difficult to account for such facts with our present knowledge of rural life in the northern countries.—*Medical Press and Circular.*

Deafness.—This trouble in ninety-eight per cent. of cases arises from middle-ear diseases, which latter in equal proportion are the result of throat and nose affections.

Throat and nose maladies may be avoided by care of these organs, as well as the general bodily health,—employing pure wool underwear, and avoiding wet clothing; if these maladies occur, they should be promptly attended to.

So also if middle-ear disease is present, it should be attended to at once, thereby preventing involvement of the internal ear and saving time, trouble, and discomfort. Middle-ear disease in the early stage is nearly always curable, and if advanced can usually be in some measure relieved. Cases of deafness arising from affections of the external ear are curable; those arising from affections of the internal ear are the most serious form, and are fortunately very rare.—Doctor Lautenbach, in *Atlantic Medical Weekly.*

Syphilis in the Army vs. Licensed Prostituton.—In the French Army the largest proportion of venereal disease was found in 1875—74 per 1000. In the English Army the proportion was 139 per 1000. The highest figure was reached two years later, 274 per 1000; while in the French Army the figure stood as low as 52 per 1000. From the figures it may be concluded that venereal disease is much more frequent in countries where free prostitution exists than in those where it is licensed. It should not be inferred from these statistics that the English soldier is more immoral than his Gallic *confrère.* The French soldier, if he has the means, can provide himself with a mistress,—an institution unknown, as a rule, to the English soldier. Clandestine prostitution is greatly on the increase in France, especially since restrictions have been in great measure removed from the opening of liquor shops.—*Edinburgh Medical Journal.*

Malaria and Microbes.—The head of the well known East Indian Chloroform Commissions, Doctor Edward Lawrie, of Hyderabad, emphatically declares there are no specific microbes in the blood in malaria, and that those investigators who have made such a claim have mistaken the nuclei of the white corpuscles for microbes.—*New York Sun.*